Pioneer sound.vision.soul

Service Manual

TOYOTA

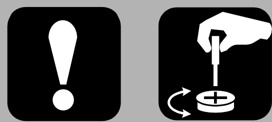
ORDER NO.
CRT2889

LEXUS GX470
LAND CRUISER PRADO
AUDIO SYSTEM
POWER AMPLIFIER

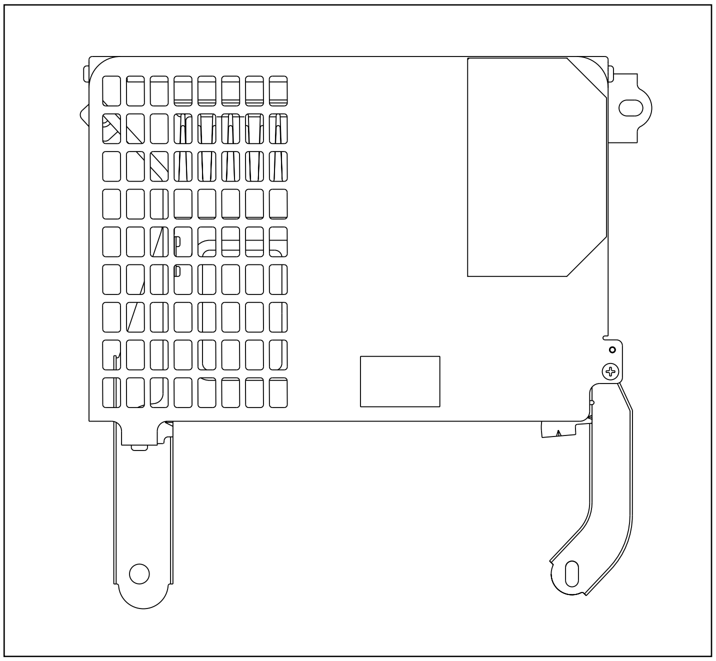
VEHICLE	DESTINATION	PRODUCED AFTER	TOYOTA PART No.	ID No.	PIONEER MODEL No.
LAND CRUISER PRADO	UK, Ireland	September 2002	86280-60280	——	GM-8027ZT/WL
LEXUS GX470	U.S.A., Canada	November 2002	86280-60290	——	GM-8027ZT/E
LAND CRUISER PRADO	Europe	September 2002	86280-60310	——	GM-8127ZT/EW
LAND CRUISER PRADO	UK, Ireland	September 2002	86280-60300	——	GM-8127ZT/WL

Manufactured for TOYOTA
by PIONEER CORPORATION

PUB. NO. **CRT2889**



For details, refer to "Important symbols for good services".



SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

NOTE: 

- When diagnosing a product, take care of its heated portion.

Power IC	(IC801,802,803)
Power Supply IC	(IC901,902)
DSP IC	(IC201,251)
Heat Sink	
IC Holder	

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety



You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments



To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning



For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws



To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts



Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

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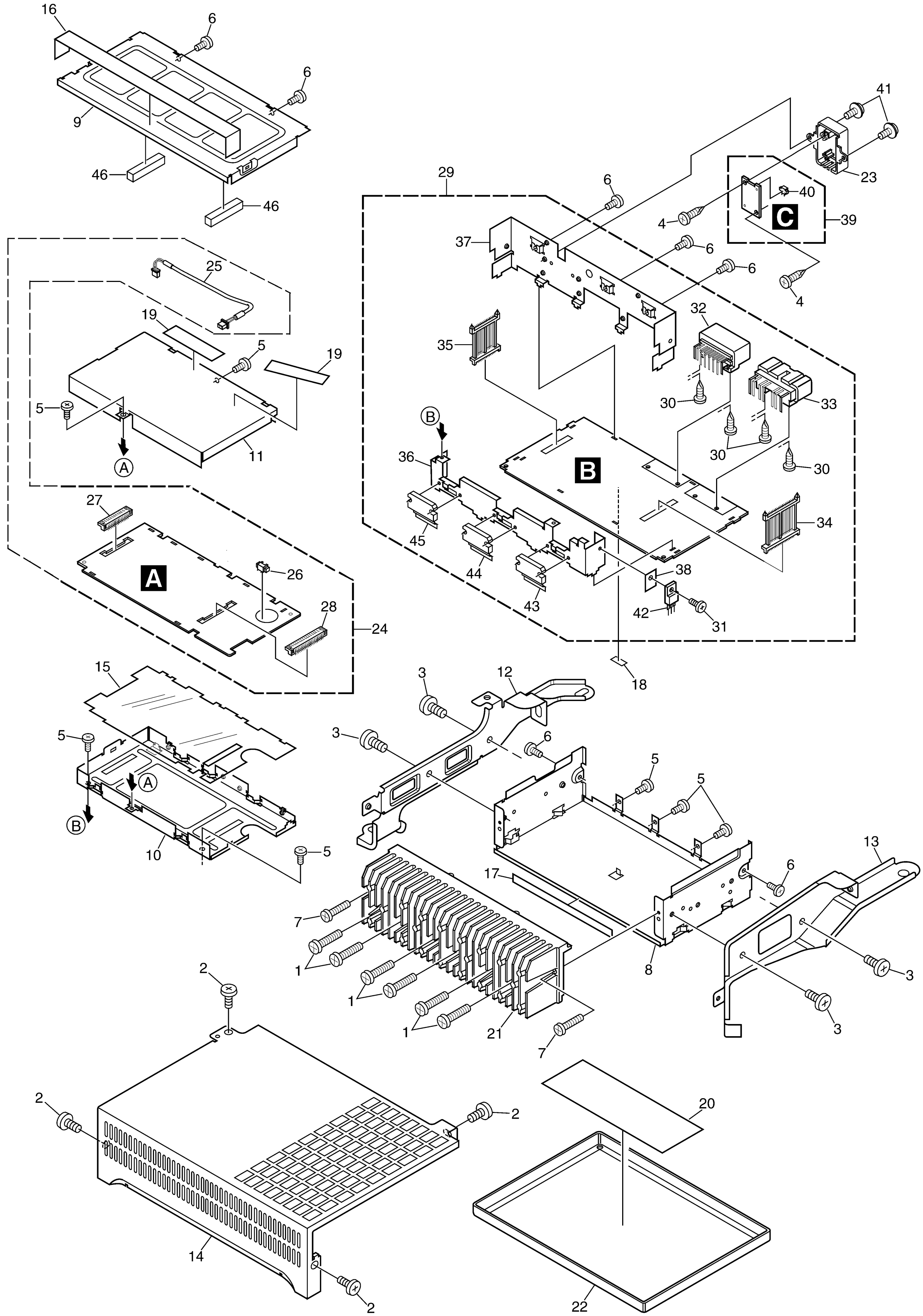
1. SPECIFICATIONS

Power source . . . . .13.2±0.1V(10.5-16.0V)
Grounding . . . . .Negative type
Backup current . . . . .1.0mA or less
Dimensions(No Bracket) . . . .261.6mm(W)x73mm(H)x183.8mm(D)
Weight 2.465kg
Maximum output power . . . .22W or more(Front)
22W or more(Squawker-Front)
22W or more(Rear)
22W or more(Woofer)

A
B
C
D
E
F

2. EXPLODED VIEWS AND PARTS LIST

2.1 EXTERIOR



NOTE:

- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual.
  (In the case of no amount instructions, apply as you think it appropriate.)

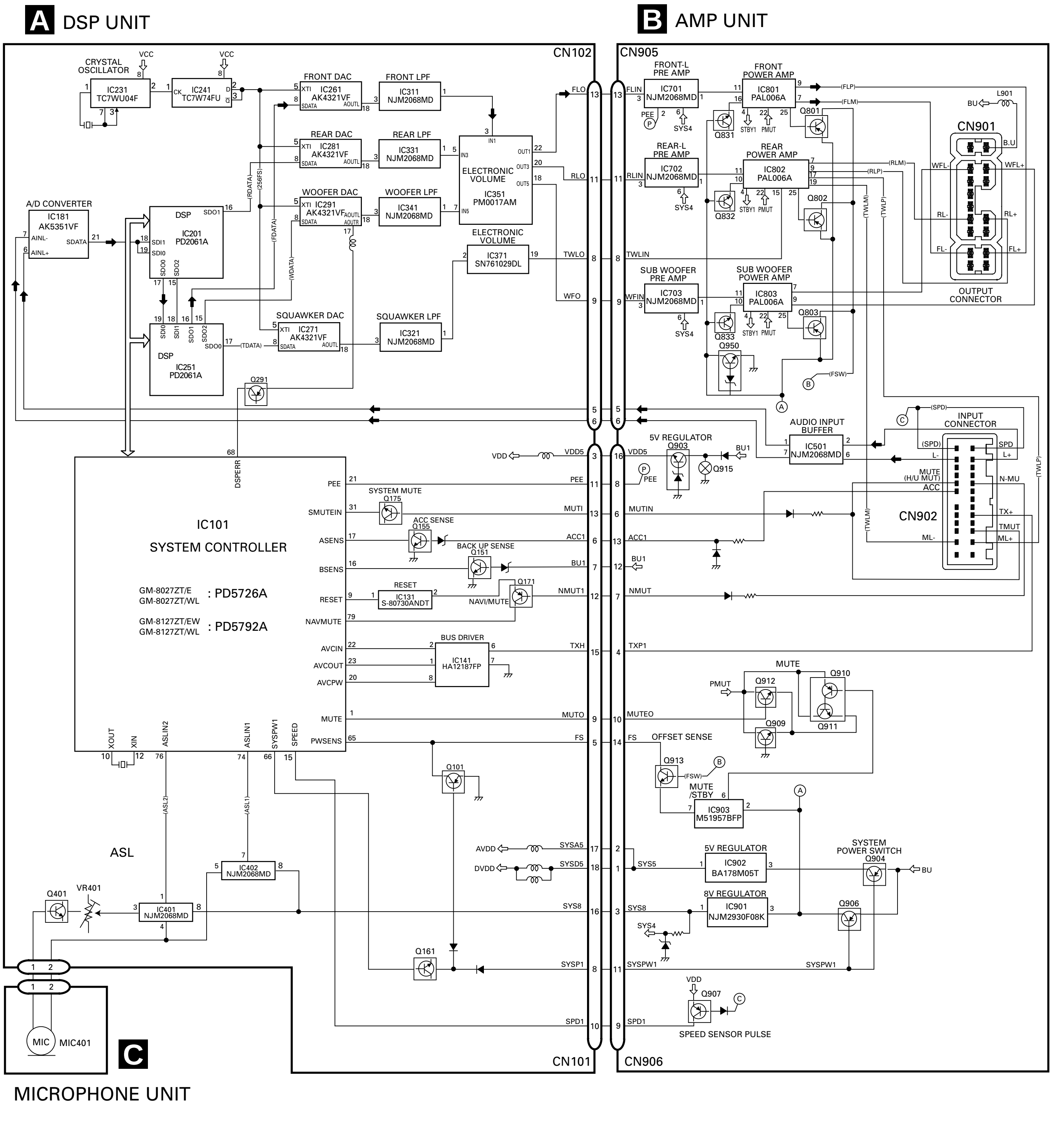
● EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ30P200FMC
	2	Screw	BMZ40P060FZK
	3	Screw	BMZ50P060FMC
	4	Screw	BPZ26P080FMC
	5	Screw	BSZ26P060FMC
	6	Screw	BSZ30P060FMC
	7	Screw	BSZ30P100FMC
	8	Chassis	CNA2142
	9	Case	CNB2563
	10	Shield Case	CNC8185
	11	Shield Case	CNC8186
	12	Bracket	CNC9778
	13	Bracket	CNC9779
	14	86287-60020	CND1013
	15	Insulator	CNM6145
	16	Seal	CNM6686
	17	Seal	CNM7170
	18	Seal	CNM7305
	19	Seal	CNM7745
	20	Tape	CNM7882
	21	Heat Sink	CNR1566
	22	Cover	CNV7037
	23	Cover	CNV7605
	24	DSP Unit(GM-8027ZT/WL)	CWM8076
		DSP Unit(GM-8027ZT/E)	CWM8074
		DSP Unit(GM-8127ZT/WL)	CWM8356
		DSP Unit(GM-8127ZT/EW)	CWM8353
	25	Cord Assy	CDE6990
	26	Connector(CN401)	CKS2191
	27	Socket(CN102)	CKS3632

Mark	No.	Description	Part No.
	28	Socket(CN101)	CKS4241
	29	Amp Unit(GM-8076ZT/WL)	CWM8077
		Amp Unit(GM-8076ZT/E)	CWM8075
		Amp Unit(GM-8176ZT/WL)	CWM8355
		Amp Unit(GM-8176ZT/EW)	CWM8352
	30	Screw	BPZ30P060FSN
	31	Screw	BSZ26P080FMC
	32	Connector(CN902)	CKM1308
	33	Connector(CN901)	CKM1310
	34	Plug(CN906)	CKS4240
	35	Plug(CN905)	CKS4242
	36	Holder	CNC8187
	37	Bracket	CND1012
	38	Sheet	CNM7015
	39	Microphone Unit	CWM8205
	40	Connector(CN402)	CKS2191
	41	Screw	ISS26P060FMC
	42	IC(IC902)	BA178M05T
	43	IC(IC801)	PAL006A
	44	IC(IC802)	PAL006A
	45	IC(IC803)	PAL006A
	46	Cushion	CNM7756

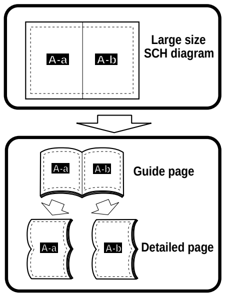
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

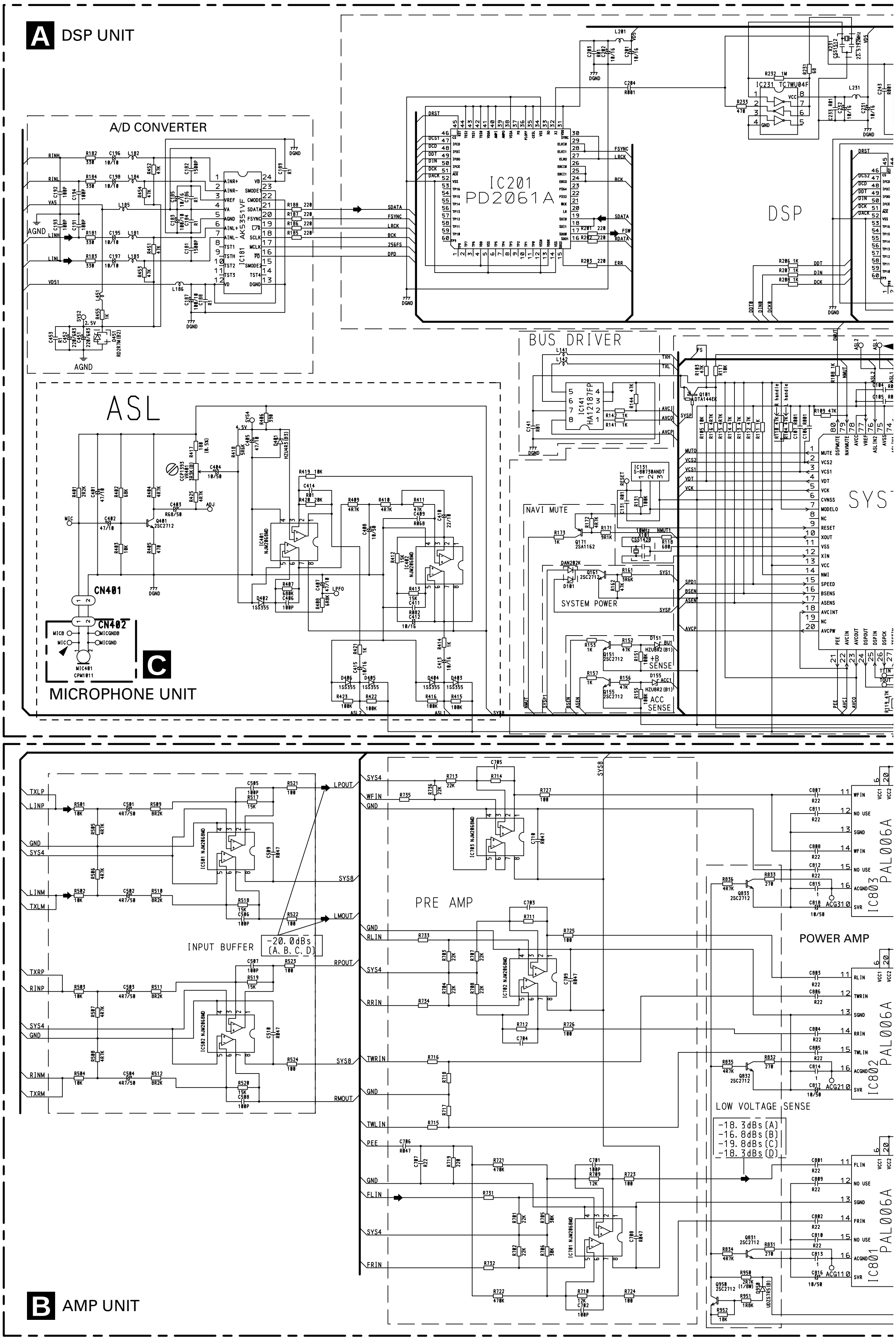


3.2 SCHEMATIC DIAGRAM (GUIDE PAGE)

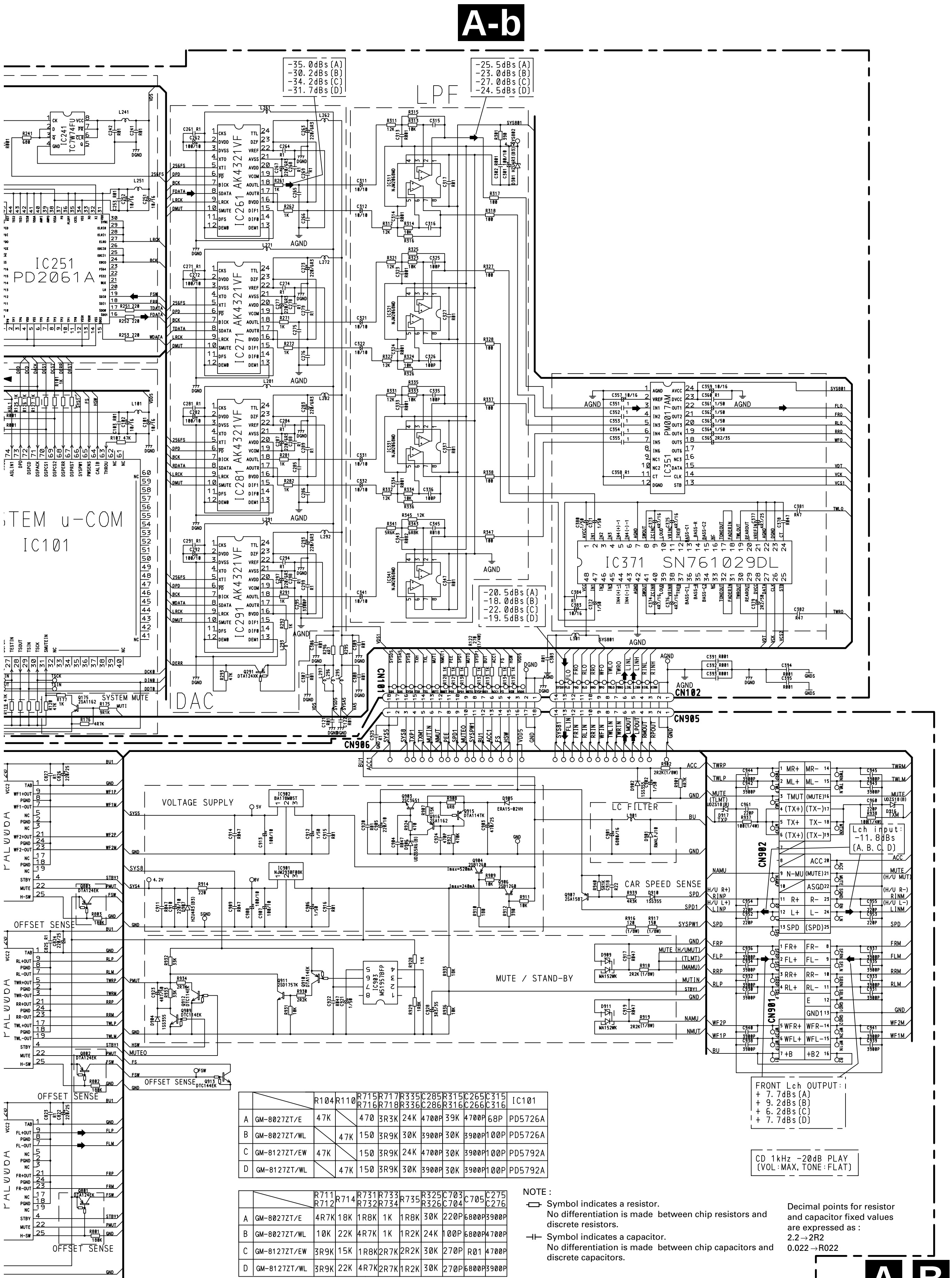
Note: When ordering service parts, be sure to refer to " EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



A-a



A B C



		R104	R110	R715 R716	R717 R718	R335 R336	C285 C286	R315 R316	C265 C266	C315 C316	IC101
A	GM-8027ZT/E	47K		470	3R3K	24K	4700P	39K	4700P	68P	PD5726A
B	GM-8027ZT/WL		47K	150	3R9K	30K	3900P	30K	3900P	100P	PD5726A
C	GM-8127ZT/EW	47K		150	3R9K	24K	4700P	30K	3900P	100P	PD5792A
D	GM-8127ZT/WL		47K	150	3R9K	30K	3900P	30K	3900P	100P	PD5792A

		R711 R712	R714	R731 R732	R733 R734	R735	R325 R326	C703 C704	C705	C275 C276
A	GM-8027ZT/E	4R7K	18K	1R8K	1K	1R8K	30K	220P	6800P	3900P
B	GM-8027ZT/WL	10K	22K	4R7K	1K	1R2K	24K	100P	6800P	4700P
C	GM-8127ZT/EW	3R9K	15K	1R8K	2R7K	2R2K	30K	270P	R01	4700P
D	GM-8127ZT/WL	3R9K	22K	4R7K	2R7K	1R2K	30K	270P	6800P	3900P

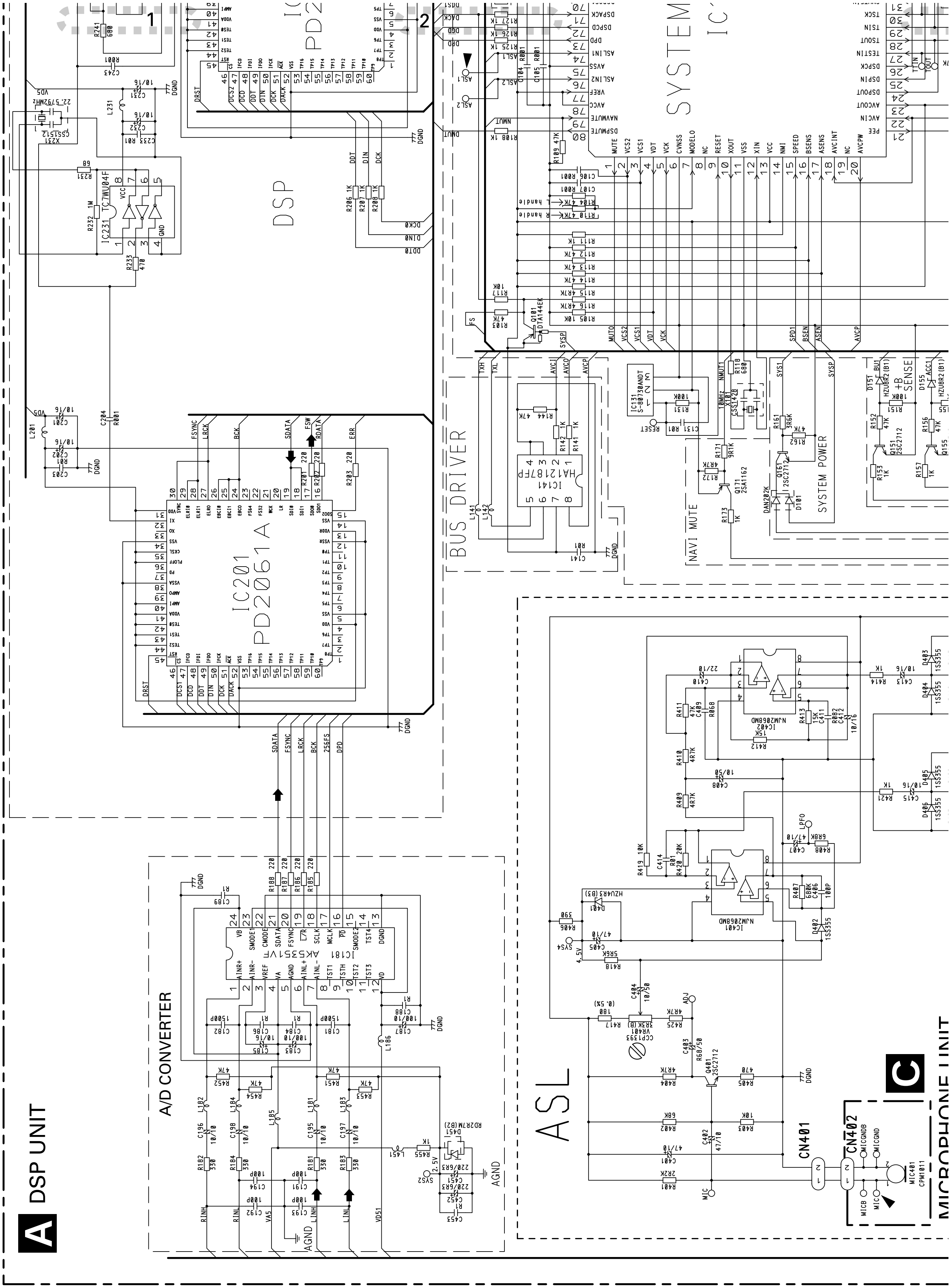
NOTE :

- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022

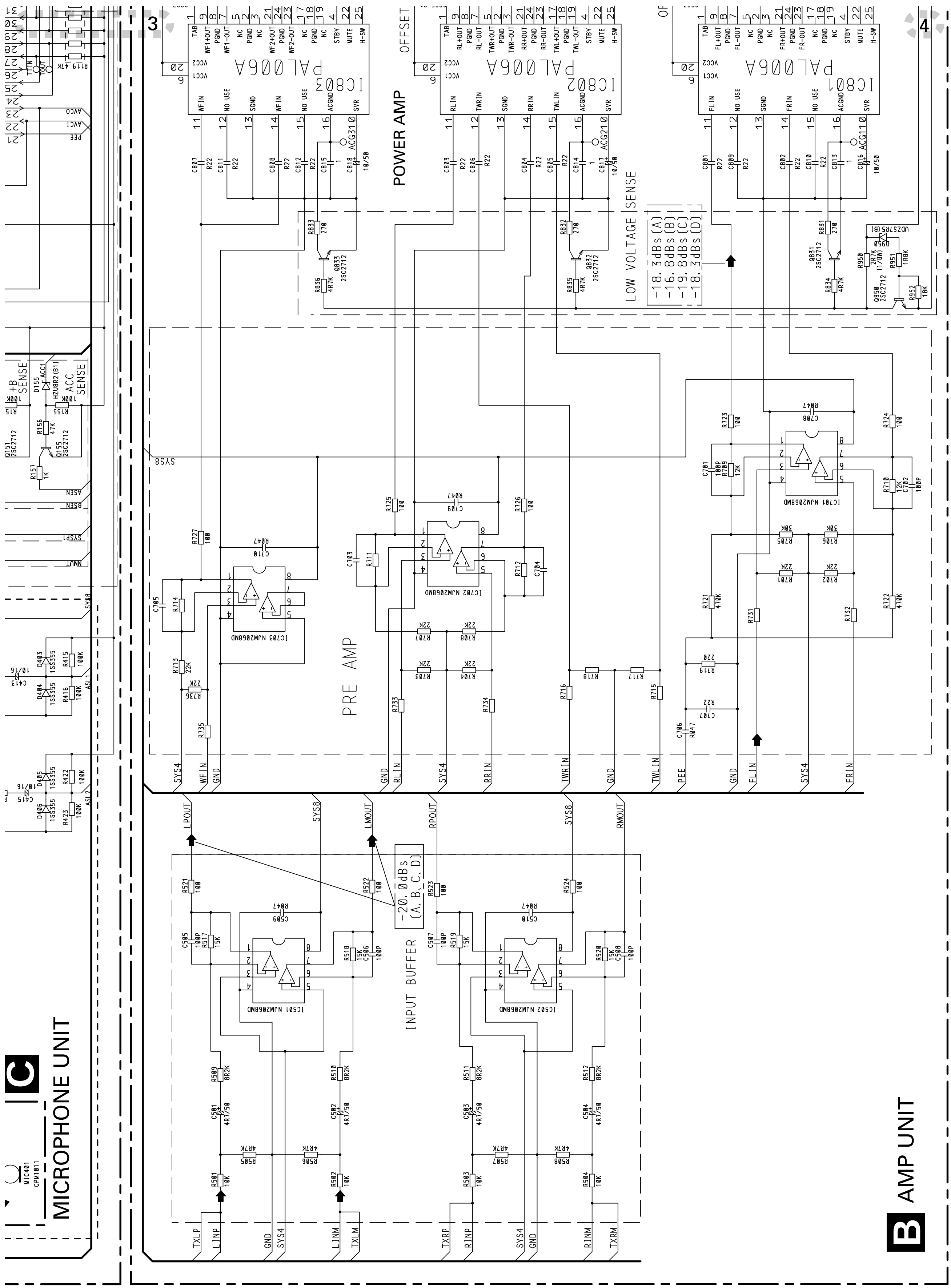
A B

A-b


A DSP UNIT
A/D CONVERTER
DSP
IC201
PD2061A
IC181 AK5351VF
IC231 TC7WU04F
BUS DRIVER
IC141 HA12187FP
NAVI MUTE
SYSTEM POWER
ASL
C MICROPHONE UNIT
CN401
CN402

A-a

A-b



A-a

A-b
A-a

A
B
C
D
E
F

A

B

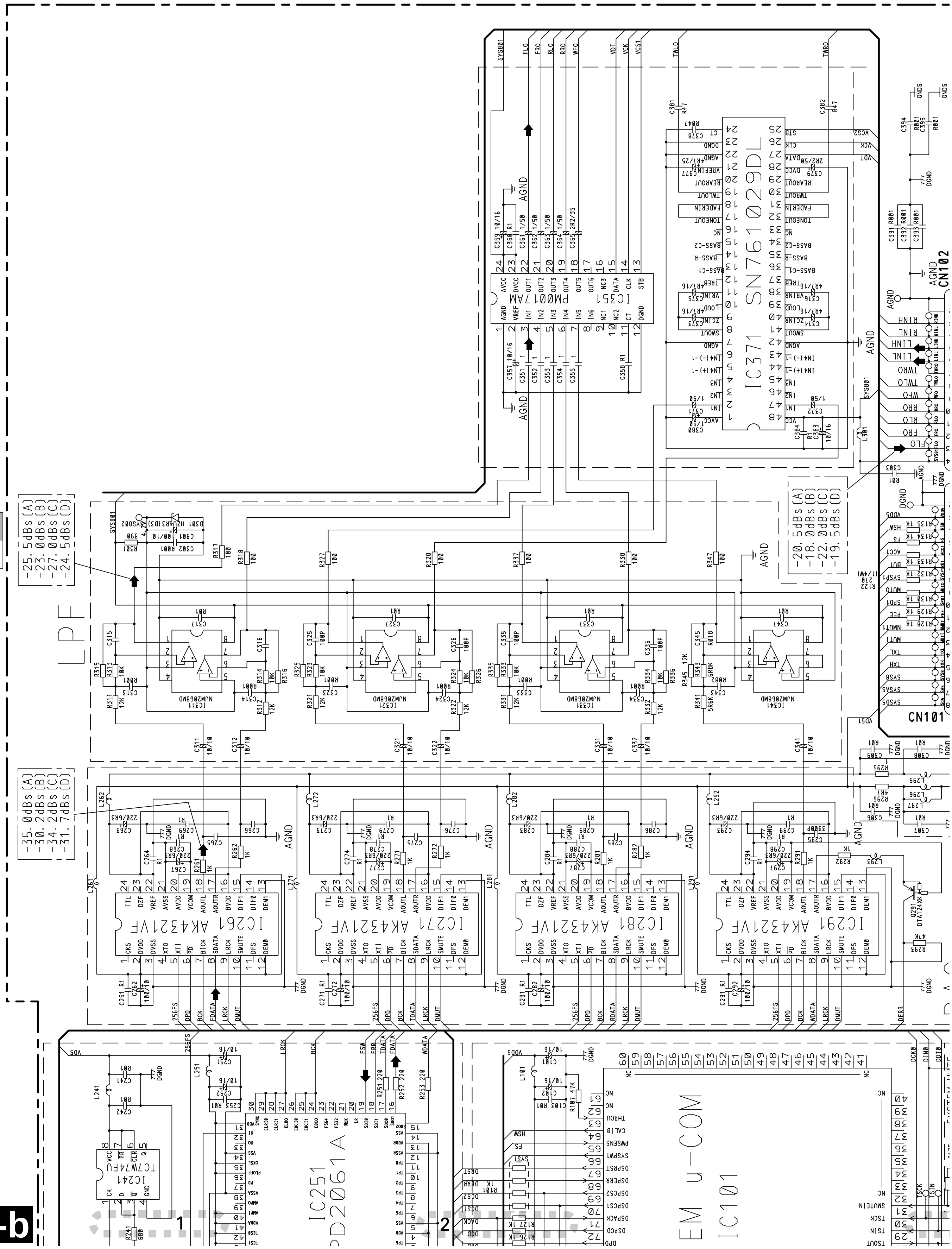
C

D

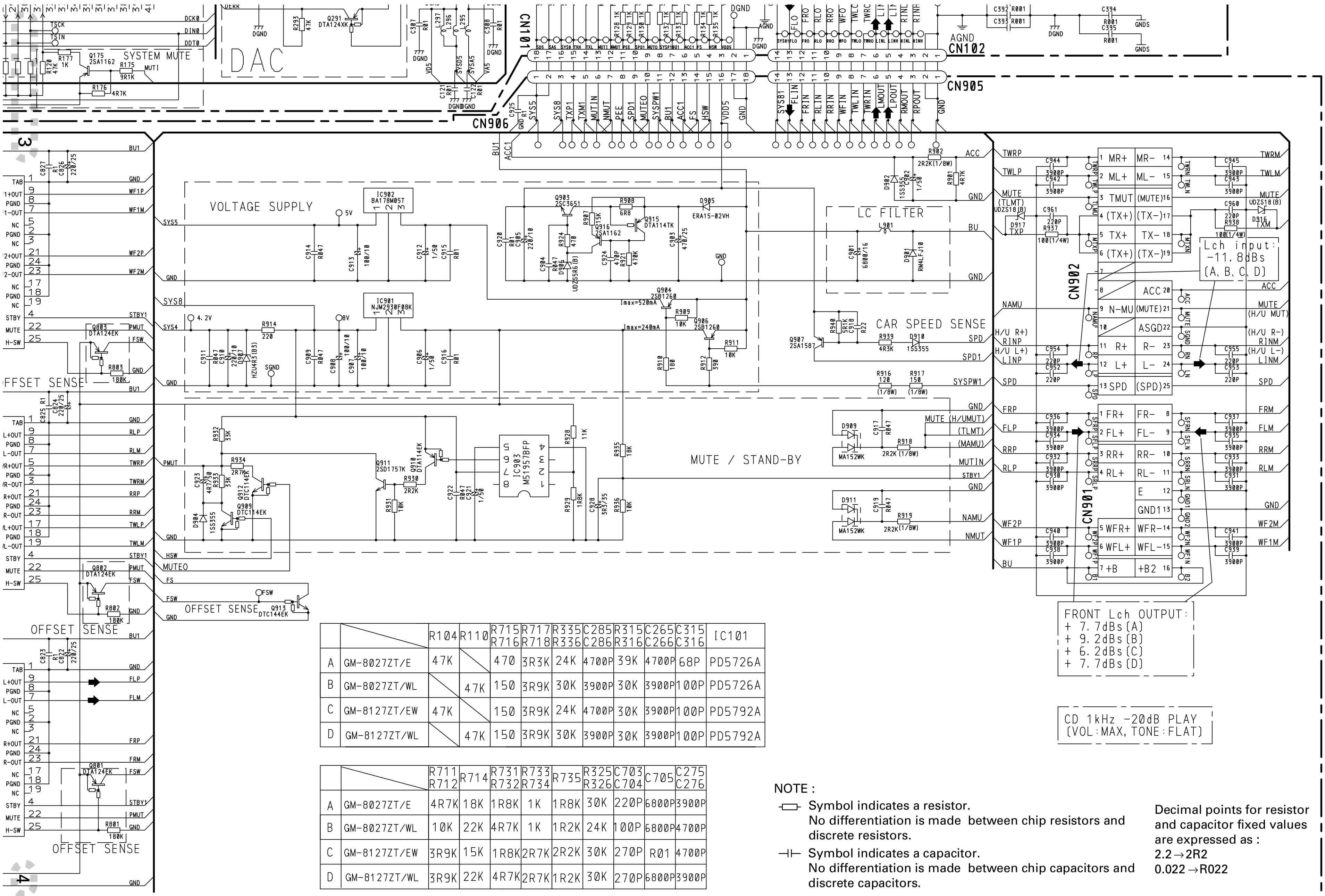
E

F

A-a A-b



A-b



		R104	R110	R715 R716	R717 R718	R335 R336	C285 C286	R315 R316	C265 C266	C315 C316	IC101
A	GM-8027ZT/E	47K		470	3R3K	24K	4700P	39K	4700P	68P	PD5726A
B	GM-8027ZT/WL		47K	150	3R9K	30K	3900P	30K	3900P	100P	PD5726A
C	GM-8127ZT/EW	47K		150	3R9K	24K	4700P	30K	3900P	100P	PD5792A
D	GM-8127ZT/WL		47K	150	3R9K	30K	3900P	30K	3900P	100P	PD5792A

		R711 R712	R714	R731 R732	R733 R734	R735	R325 R326	C703 C704	C705	C275 C276
A	GM-8027ZT/E	4R7K	18K	1R8K	1K	1R8K	30K	220P	6800P	3900P
B	GM-8027ZT/WL	10K	22K	4R7K	1K	1R2K	24K	100P	6800P	4700P
C	GM-8127ZT/EW	3R9K	15K	1R8K	2R7K	2R2K	30K	270P	R01	4700P
D	GM-8127ZT/WL	3R9K	22K	4R7K	2R7K	1R2K	30K	270P	6800P	3900P

NOTE :

- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022

A-a A-b

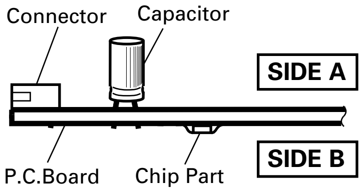
4. PCB CONNECTION DIAGRAM

4.1 DSP UNIT

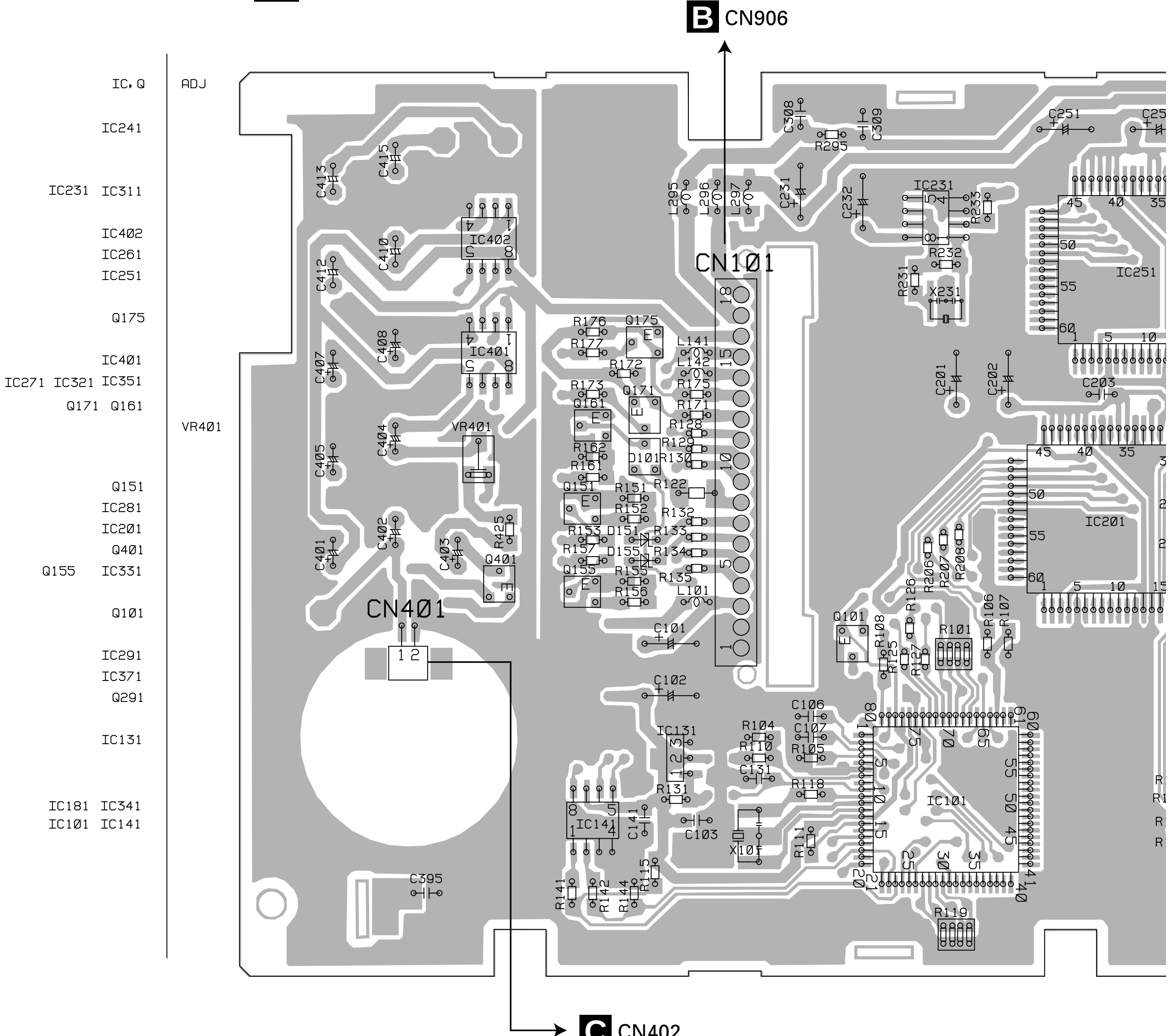
NOTE FOR PCB DIAGRAMS

1.The parts mounted on this PCB include all necessary parts for several destination.
For further information for respective destinations, be sure to check with the schematic diagram.

2.Viewpoint of PCB diagrams



A DSP UNIT



A

B

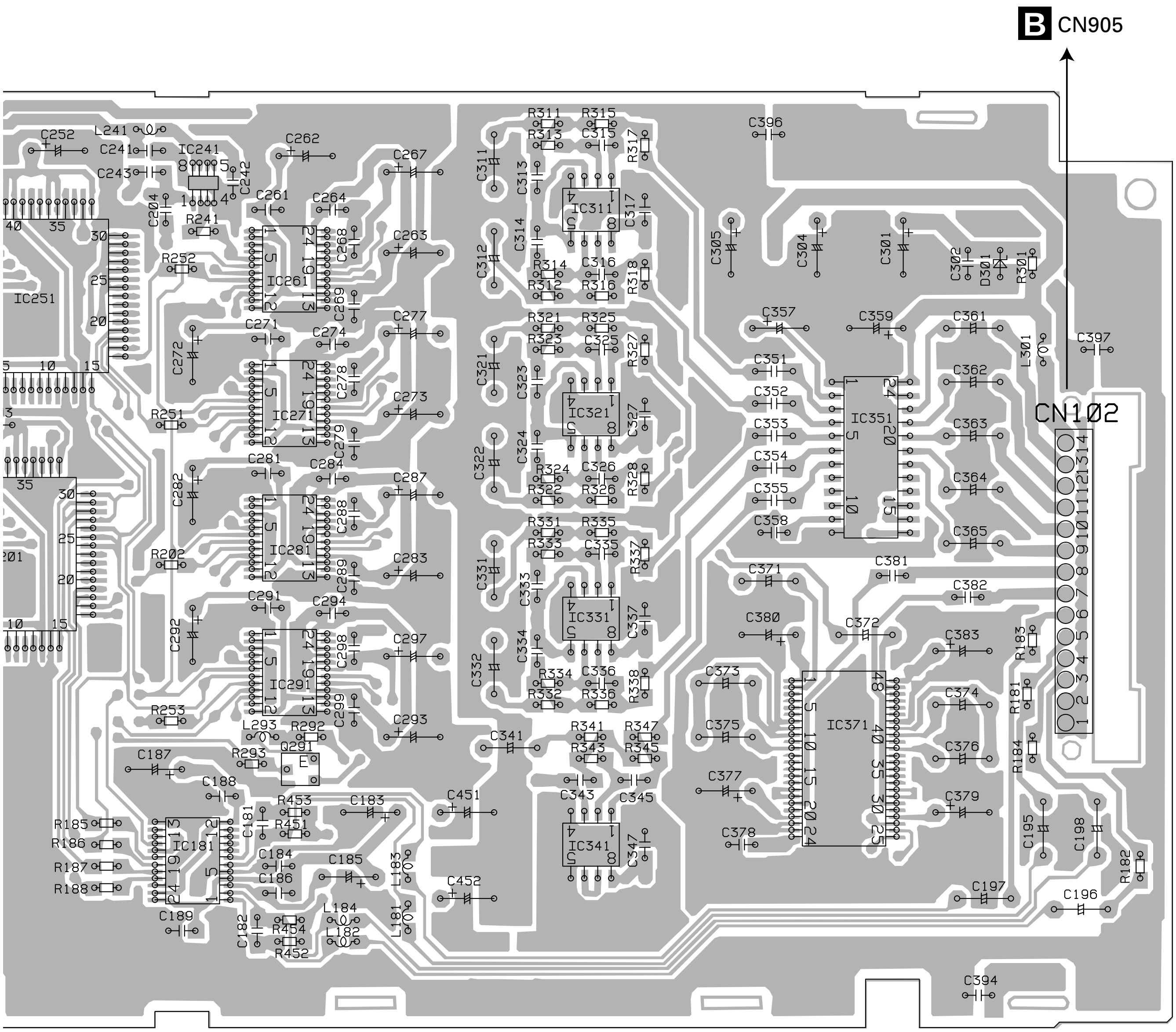
C

D

E

F

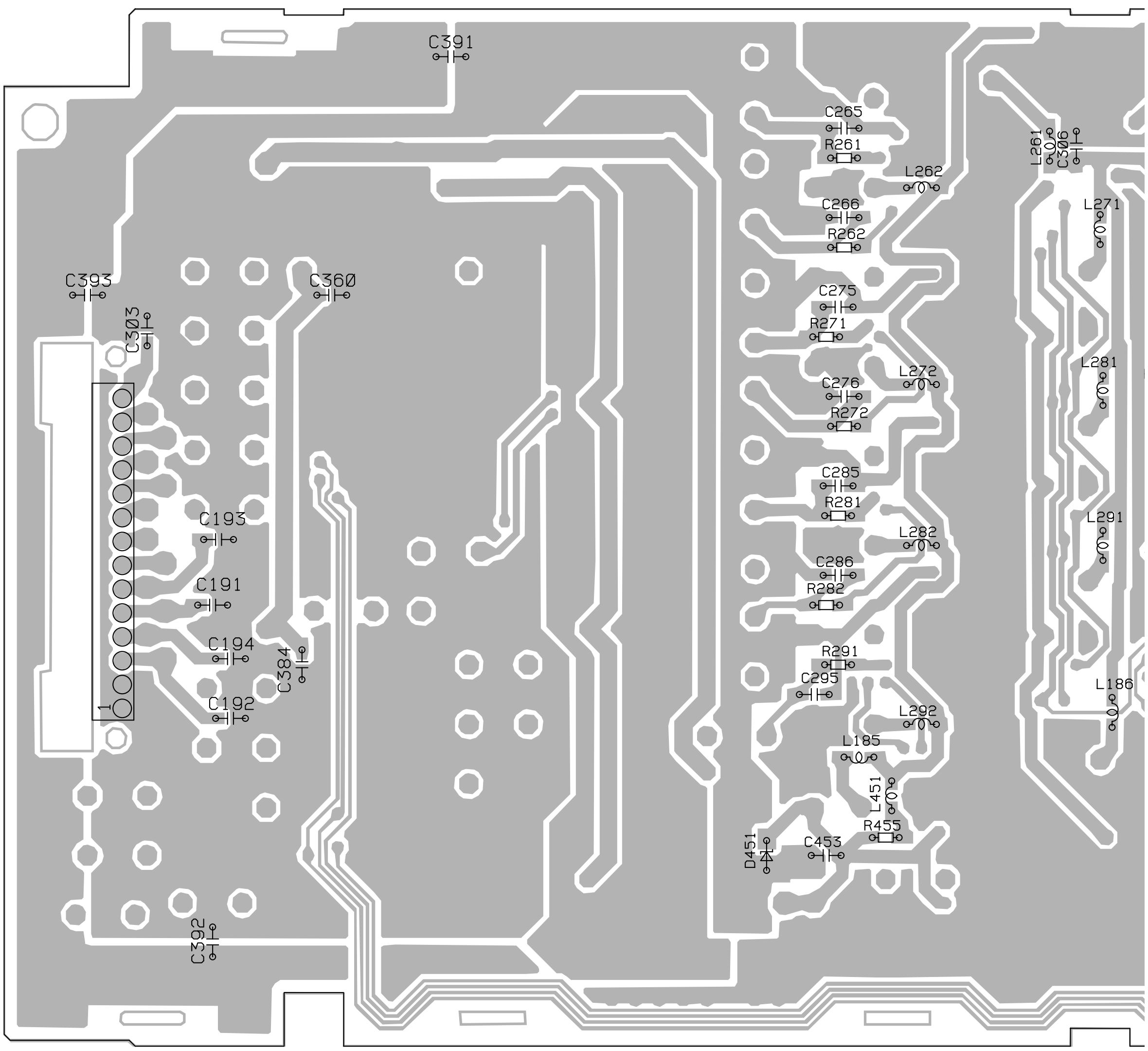
SIDE A



FRONT

A

A DSP UNIT



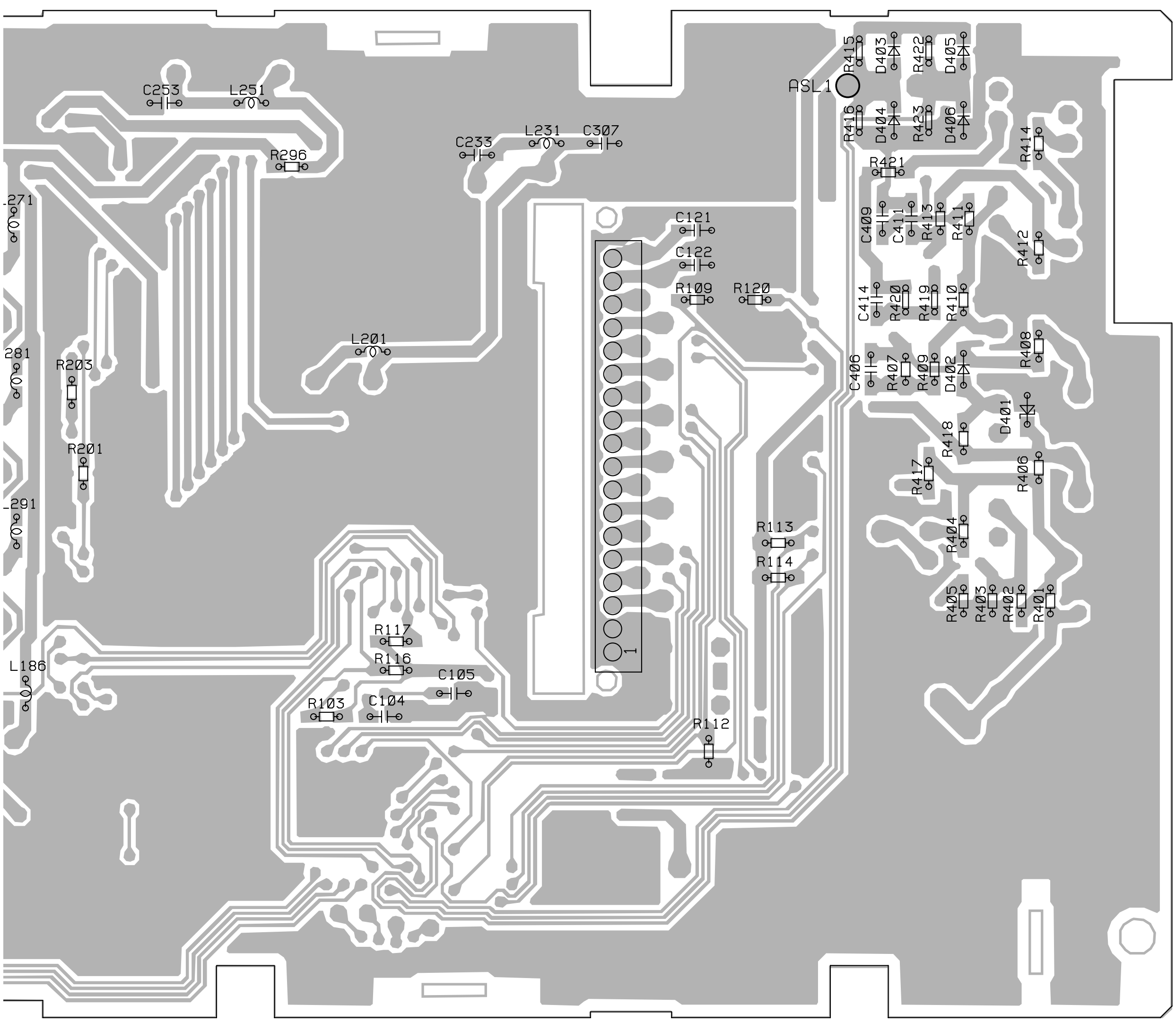
C391
C265
R261
L262
L261
C306
C266
R262
L271
C393
C360
C275
C303
R271
L281
C276
L272
R272
C285
R281
C193
L282
L291
C286
C191
R282
C194
R291
C384
C295
L186
C192
L292
L185
L451
R455
D451
C453
C392

A

B

SIDE B

C



D

E

F

A

4.2 AMP UNIT

B AMP UNIT

A CN101

IC,Q

IC801 IC802 IC803

Q802
Q801 Q803

IC902

Q915 Q916 Q831 Q832

IC703

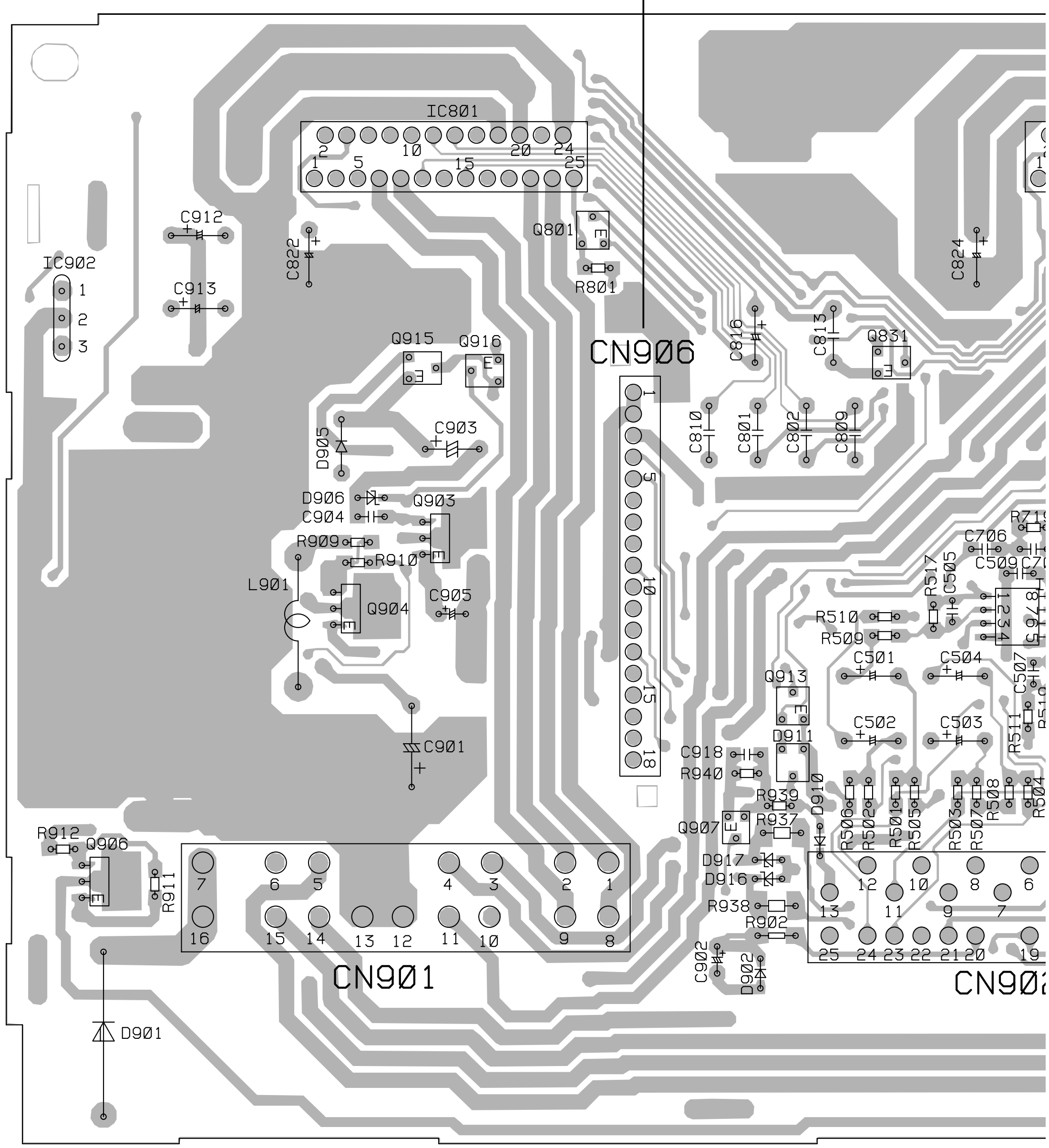
IC701

Q903 Q912
IC702 Q909

IC501
Q904

Q913 IC901
Q911
Q910
IC502

IC903
Q907
Q906



A

SIDE A

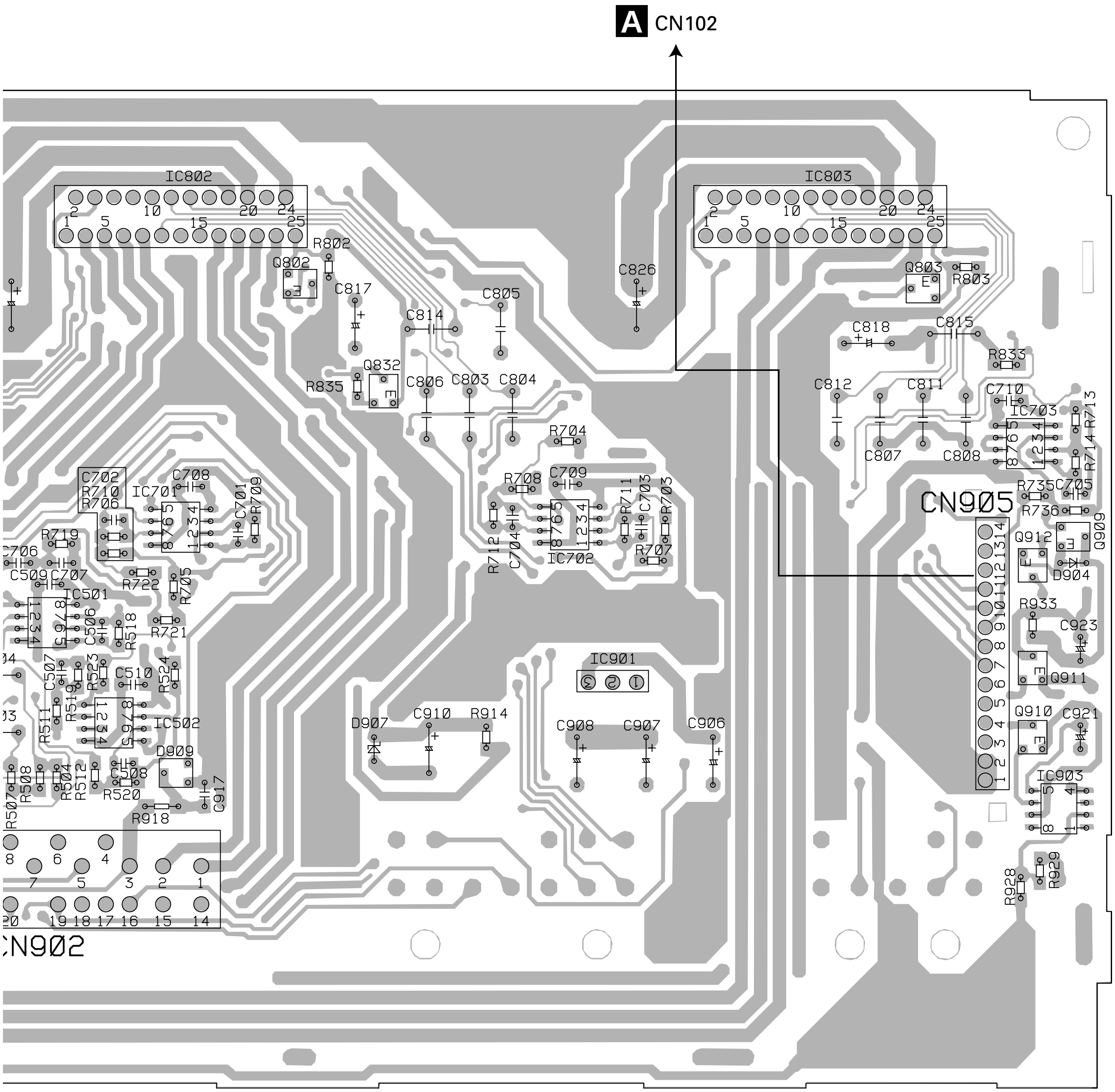
B

C

D

E

F



A

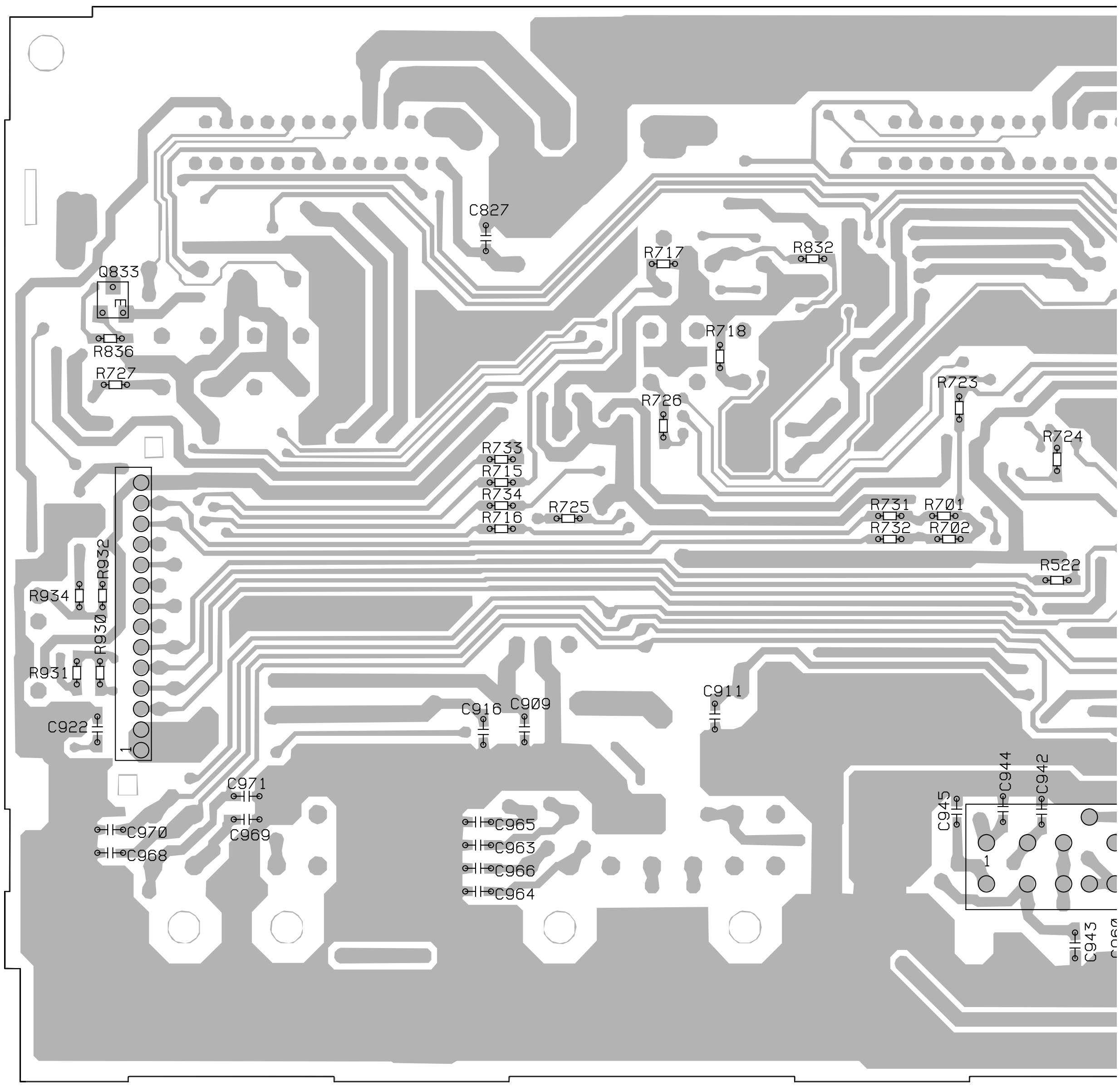
B

B AMP UNIT

C

D

E



F

A

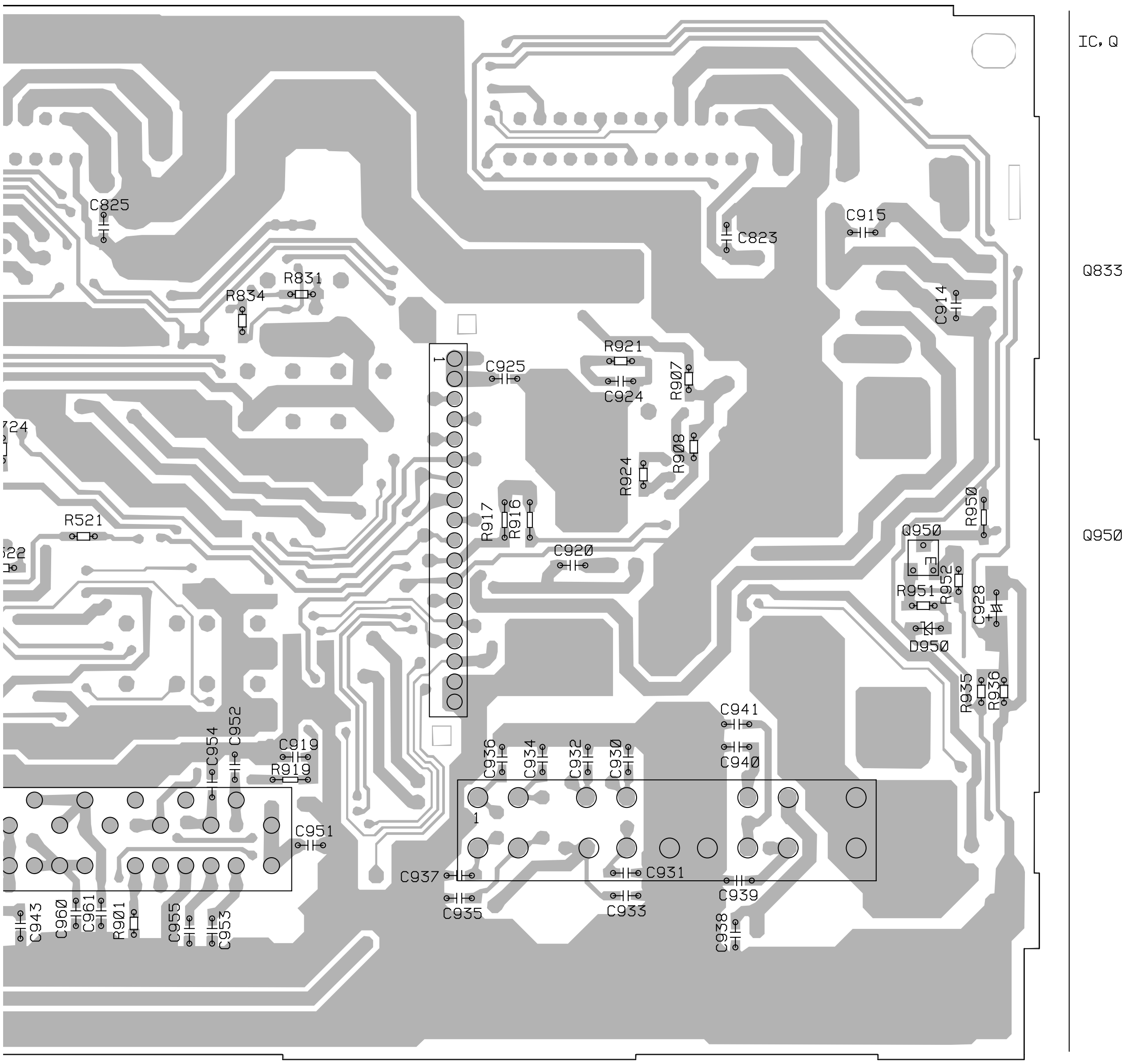
SIDE B

B

C

D

E

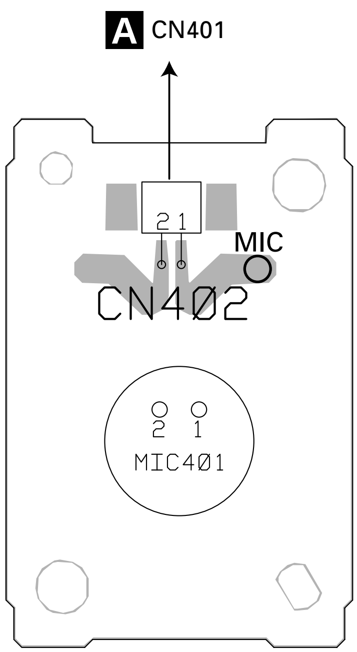


F

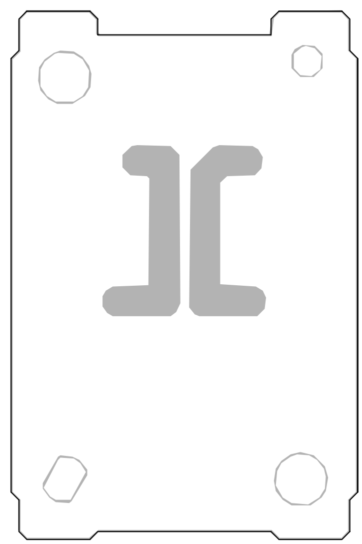
B

4.3 MICROPHONE UNIT

C MICROPHONE UNIT **SIDE A**



C MICROPHONE UNIT **SIDE B**



5. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

  Chip Resistor

  RS1/○S○○○J,RS1/○○S○○○J

  Chip Capacitor (except for CQS.....)

  CKS....., CCS....., CSZS.....

A Unit Number : CWM8076(GM-8027ZT/WL)
: CWM8074(GM-8027ZT/E)
: CWM8356(GM-8127ZT/WL)
: CWM8353(GM-8127ZT/EW)
Unit Name : DSP Unit

MISCELLANEOUS

=====Circuit Symbol and No.===		Part Name	Part No.
IC	101	IC(GM-8027ZT/WL,GM-8027ZT/E)	PD5726A
IC	101	IC(GM-8127ZT/WL,GM-8127ZT/EW)	PD5792A
IC	131	IC	S-80730ANDT
IC	141	IC	HA12187FP
IC	181	IC	AK5351VF
IC	201	IC	PD2061A
IC	231	IC	TC7WU04F
IC	241	IC	TC7W74FU
IC	251	IC	PD2061A
IC	261	IC	AK4321VF
IC	271	IC	AK4321VF
IC	281	IC	AK4321VF
IC	291	IC	AK4321VF
IC	311	IC	NJM2068MD
IC	321	IC	NJM2068MD
IC	331	IC	NJM2068MD
IC	341	IC	NJM2068MD
IC	351	IC	PM0017AM
IC	371	IC	SN761029DL
IC	401	IC	NJM2068MD
IC	402	IC	NJM2068MD
Q	101	Transistor	DTA144EK
Q	151	Chip Transistor	2SC2712
Q	155	Chip Transistor	2SC2712
Q	161	Chip Transistor	2SC2712
Q	171	Transistor	2SA1162
Q	175	Transistor	2SA1162
Q	291	Transistor	DTA124XK
Q	401	Chip Transistor	2SC2712
D	101	Diode	DAN202K
D	151	Diode	HZU8R2(B1)
D	155	Diode	HZU8R2(B1)
D	301	Diode	HZU4R3(B3)
D	401	Diode	HZU4R3(B3)
D	402	Diode	1SS355
D	403	Diode	1SS355
D	404	Diode	1SS355
D	405	Diode	1SS355
D	406	Diode	1SS355
D	451	Diode	RD2R7M(B2)
L	101	Inductor	LCTB1R0K2125
L	141	Inductor	CTF1305
L	142	Inductor	CTF1305
L	181	Inductor	LCTB1R0K2125
L	182	Inductor	LCTB1R0K2125

=====Circuit Symbol and No.===		Part Name	Part No.
L	183	Inductor	LCTB1R0K2125
L	184	Inductor	LCTB1R0K2125
L	185	Inductor	LCTB4R7K2125
L	186	Inductor	LCTB120K2125
L	201	Inductor	LCTBR82K2125
L	231	Inductor	LCTB1R0K2125
L	241	Inductor	LCTB1R0K2125
L	251	Inductor	LCTBR82K2125
L	261	Inductor	LCTB1R0K2125
L	262	Inductor	LCTB120K2125
L	271	Inductor	LCTB1R0K2125
L	272	Inductor	LCTB120K2125
L	281	Inductor	LCTB1R0K2125
L	282	Inductor	LCTB120K2125
L	291	Inductor	LCTB1R0K2125
L	292	Inductor	LCTB120K2125
L	293	Inductor	LCTB1R0K2125
L	295	Inductor	LCTA1R0J3225
L	296	Chip-Inductor	LCTA2R2J3225
L	297	Chip-Inductor	LCTA2R2J3225
L	301	Inductor	LCTB1R0K2125
L	451	Inductor	LCTB4R7K2125
X	101	Radiator 10.00MHz	CSS1428
X	231	Ceramic Resonator 22.5792MHz	CSS1512
VR	401	Semi-fixed 1kΩ(OB)	CCP1393

RESISTORS

R	101	1kΩ	CCN1120
R	103		RS1/10S473J
R	104	(GM-8027ZT/E,GM-8127ZT/EW)	RS1/10S473J
R	105		RS1/10S103J
R	107		RS1/10S473J
R	108		RS1/10S102J
R	109		RS1/10S473J
R	110	(GM-8027ZT/WL,GM-8127ZT/WL)	RS1/10S473J
R	111		RS1/10S102J
R	112		RS1/10S473J
R	113		RS1/10S473J
R	114		RS1/10S473J
R	115		RS1/10S472J
R	116		RS1/10S472J
R	117		RS1/10S103J
R	118		RS1/10S681J
R	119	47kΩ	CCN1131
R	120		RS1/10S473J
R	122		RS1/4S271J
R	125		RS1/16S102J
R	126		RS1/16S102J
R	127		RS1/16S102J
R	128		RS1/16S102J
R	129		RS1/16S102J
R	130		RS1/16S102J

Circuit Symbol	No.	Part Name	Part No.
R	131		RS1/10S104J
R	132		RS1/16S102J
R	133		RS1/16S102J
R	134		RS1/16S102J
R	135		RS1/16S102J
R	141		RS1/10S102J
R	142		RS1/10S102J
R	144		RS1/10S473J
R	151		RS1/10S104J
R	152		RS1/10S473J
R	153		RS1/10S102J
R	155		RS1/10S104J
R	156		RS1/10S473J
R	157		RS1/10S102J
R	161		RS1/10S362J
R	162		RS1/10S473J
R	171		RS1/10S912J
R	172		RS1/10S472J
R	173		RS1/10S102J
R	175		RS1/10S912J
R	176		RS1/10S472J
R	177		RS1/10S102J
R	181		RS1/10S331J
R	182		RS1/10S331J
R	183		RS1/10S331J
R	184		RS1/10S331J
R	185		RS1/10S221J
R	186		RS1/10S221J
R	187		RS1/10S221J
R	188		RS1/10S221J
R	201		RS1/10S221J
R	202		RS1/10S221J
R	203		RS1/10S221J
R	206		RS1/16S102J
R	207		RS1/16S102J
R	208		RS1/16S102J
R	231		RS1/10S680J
R	232		RS1/10S105J
R	233		RS1/10S471J
R	241		RS1/10S681J
R	251		RS1/10S221J
R	252		RS1/10S221J
R	253		RS1/10S221J
R	261		RS1/10S102J
R	262		RS1/10S102J
R	271		RS1/10S102J
R	272		RS1/10S102J
R	281		RS1/10S102J
R	282		RS1/10S102J
R	291		RS1/10S102J
R	292		RS1/10S102J
R	293		RS1/10S473J
R	295		RS1/10S1R0J
R	296		RS1/10S4R7J
R	301		RS1/10S391J
R	311		RS1/10S123J
R	312		RS1/10S123J
R	313		RS1/10S103J
R	314		RS1/10S103J
R	315	(GM-8027ZT/WL,GM-8127ZT/WL,GM-8127ZT/EW)	RS1/10S303J
R	315	(GM-8027ZT/E)	RS1/10S393J
R	316	(GM-8027ZT/WL,GM-8127ZT/WL,GM-8127ZT/EW)	RS1/10S303J
R	316	(GM-8027ZT/E)	RS1/10S393J

Circuit Symbol	No.	Part Name	Part No.
R	317		RS1/10S101J
R	318		RS1/10S101J
R	321		RS1/10S123J
R	322		RS1/10S123J
R	323		RS1/10S103J
R	324		RS1/10S103J
R	325	(GM-8027ZT/WL)	RS1/10S243J
R	325	(GM-8127ZT/WL,GM-8027ZT/E,GM-8127ZT/EW)	RS1/10S303J
R	326	(GM-8027ZT/WL)	RS1/10S243J
R	326	(GM-8127ZT/WL,GM-8027ZT/E,GM-8127ZT/EW)	RS1/10S303J
R	327		RS1/10S101J
R	328		RS1/10S101J
R	331		RS1/10S123J
R	332		RS1/10S123J
R	333		RS1/10S103J
R	334		RS1/10S103J
R	335	(GM-8027ZT/WL,GM-8127ZT/WL)	RS1/10S303J
R	335	(GM-8027ZT/E,GM-8127ZT/EW)	RS1/10S243J
R	336	(GM-8027ZT/WL,GM-8127ZT/WL)	RS1/10S303J
R	336	(GM-8027ZT/E,GM-8127ZT/EW)	RS1/10S243J
R	337		RS1/10S101J
R	338		RS1/10S101J
R	341		RS1/10S562J
R	343		RS1/10S682J
R	345		RS1/10S123J
R	347		RS1/10S101J
R	401		RS1/10S222J
R	402		RS1/10S683J
R	403		RS1/10S103J
R	404		RS1/10S472J
R	405		RS1/10S471J
R	406		RS1/10S391J
R	407		RS1/10S684J
R	408		RS1/10S682J
R	409		RS1/10S472J
R	410		RS1/10S472J
R	411		RS1/10S473J
R	412		RS1/10S153J
R	413		RS1/10S153J
R	414		RS1/10S102J
R	415		RN1/10SE1003D
R	416		RN1/10SE1003D
R	417		RS1/10S1800D
R	418		RS1/10S562J
R	419		RN1/10SE1002D
R	420		RN1/10SE2002D
R	421		RS1/10S102J
R	422		RN1/10SE1003D
R	423		RN1/10SE1003D
R	425		RS1/10S472J
R	451		RS1/10S473J
R	452		RS1/10S473J
R	453		RS1/10S473J
R	454		RS1/10S473J
R	455		RS1/10S102J

CAPACITORS

Circuit Symbol	No.	Part Name	Part No.
C	101		CEJQ100M16
C	102		CEJQ100M16
C	103		CKSQYB103K50
C	104		CKSQYB102K50
C	105		CKSQYB102K50
C	106		CKSQYB102K50
C	107		CKSQYB102K50
C	121		CKSQYB103K50
C	122		CKSQYB103K50
C	131		CKSQYB103K50

Circuit Symbol	No.	Part Name	Part No.
C	141		CKSQYB103K50
C	181		CKSQYB152K50
C	182		CKSQYB152K50
C	183		CEJQ101M10
C	184		CKSQYB104K25
C	185		CEJQ100M16
C	186		CKSQYB104K25
C	187		CEJQ101M10
C	188		CKSQYB104K25
C	189		CKSQYB104K25
C	191		CCSQCH101J50
C	192		CCSQCH101J50
C	193		CCSQCH101J50
C	194		CCSQCH101J50
C	195		CEJQNP100M10
C	196		CEJQNP100M10
C	197		CEJQNP100M10
C	198		CEJQNP100M10
C	201		CEJQ100M16
C	202		CEJQ100M16
C	203		CKSQYB103K50
C	204		CKSQYB102K50
C	231		CEJQ100M16
C	232		CEJQ100M16
C	233		CKSQYB103K50
C	241		CKSQYB103K50
C	242		CKSQYB103K50
C	243		CKSQYB102K50
C	251		CEJQ100M16
C	252		CEJQ100M16
C	253		CKSQYB103K50
C	261		CKSQYB104K25
C	262		CEJQ101M10
C	263		CEJQ221M6R3
C	264		CKSQYB104K25
C	265	(GM-8027ZT/WL,GM-8127ZT/WL,GM-8127ZT/EW)	CKSQYB392K50
C	265	(GM-8027ZT/E)	CKSQYB472K50
C	266	(GM-8027ZT/WL,GM-8127ZT/WL,GM-8127ZT/EW)	CKSQYB392K50
C	266	(GM-8027ZT/E)	CKSQYB472K50
C	267		CEJQ221M6R3
C	268		CKSQYB104K25
C	269		CKSQYB104K25
C	271		CKSQYB104K25
C	272		CEJQ101M10
C	273		CEJQ221M6R3
C	274		CKSQYB104K25
C	275	(GM-8027ZT/WL,GM-8127ZT/EW)	CKSQYB472K50
C	275	(GM-8127ZT/WL,GM-8027ZT/E)	CKSQYB392K50
C	276	(GM-8027ZT/WL,GM-8127ZT/EW)	CKSQYB472K50
C	276	(GM-8127ZT/WL,GM-8027ZT/E)	CKSQYB392K50
C	277		CEJQ221M6R3
C	278		CKSQYB104K25
C	279		CKSQYB104K25
C	281		CKSQYB104K25
C	282		CEJQ101M10
C	283		CEJQ221M6R3
C	284		CKSQYB104K25
C	285	(GM-8027ZT/WL,GM-8127ZT/WL)	CKSQYB392K50
C	285	(GM-8027ZT/E,GM-8127ZT/EW)	CKSQYB472K50
C	286	(GM-8027ZT/WL,GM-8127ZT/WL)	CKSQYB392K50
C	286	(GM-8027ZT/E,GM-8127ZT/EW)	CKSQYB472K50
C	287		CEJQ221M6R3
C	288		CKSQYB104K25
C	289		CKSQYB104K25
C	291		CKSQYB104K25
C	292		CEJQ101M10
C	293		CEJQ221M6R3
C	294		CKSQYB104K25
C	295		CKSQYB332K50
C	297		CEJQ221M6R3
C	298		CKSQYB104K25
C	299		CKSQYB104K25
C	301		CEJQ101M10
C	302		CKSQYB102K50
C	303		CKSQYB103K50
C	306		CKSQYB103K50
C	307		CKSQYB103K50
C	308		CKSQYB103K50
C	309		CKSQYB103K50
C	311		CEJQNP100M10
C	312		CEJQNP100M10
C	313		CKSQYB102K50
C	314		CKSQYB102K50
C	315	(GM-8027ZT/WL,GM-8127ZT/WL,GM-8127ZT/EW)	CCSQCH101J50
C	315	(GM-8027ZT/E)	CCSQCH680J50
C	316	(GM-8027ZT/WL,GM-8127ZT/WL,GM-8127ZT/EW)	CCSQCH101J50
C	316	(GM-8027ZT/E)	CCSQCH680J50
C	317		CKSQYB103K50
C	321		CEJQNP100M10
C	322		CEJQNP100M10
C	323		CKSQYB102K50
C	324		CKSQYB102K50
C	325		CCSQCH101J50
C	326		CCSQCH101J50
C	327		CKSQYB103K50
C	331		CEJQNP100M10
C	332		CEJQNP100M10
C	333		CKSQYB102K50
C	334		CKSQYB102K50
C	335		CCSQCH101J50
C	336		CCSQCH101J50
C	337		CKSQYB103K50
C	341		CEJQNP100M10
C	343		CKSQYB823K25
C	345		CKSQYB183K50
C	347		CKSQYB103K50
C	351		CKSYB105K16
C	352		CKSYB105K16
C	353		CKSYB105K16
C	354		CKSYB105K16
C	355		CKSYB105K16
C	357		CEJQ100M16
C	358		CKSQYB104K25
C	359		CEJQ100M16
C	360		CKSQYB104K25
C	361		CEALNP1R0M50
C	362		CEALNP1R0M50
C	363		CEJQNP1R0M50
C	364		CEJQNP1R0M50
C	365		CEJQNP2R2M35
C	371		CEJQNP1R0M50
C	372		CEJQNP1R0M50
C	373		CEJQNP4R7M16
C	374		CEJQNP4R7M16
C	375		CEJQNP4R7M16
C	376		CEJQNP4R7M16
C	377		CEJQ4R7M25

Circuit Symbol	No.	Part Name	Part No.
C	378		CKSQYB473K16
C	379		CEJQ2R2M50
C	380		CEJQ1R0M50
C	381		CKSQYB474K25
C	382		CKSQYB474K25
C	383		CEJQ100M16
C	384		CKSQYB104K25
C	391		CKSQYB102K50
C	392		CKSQYB102K50
C	393		CKSQYB102K50
C	394		CKSQYB102K50
C	395		CKSQYB102K50
C	401		CEAT470M10
C	402		CEAT470M10
C	403	0.68μF/50V	CCH1386
C	404		CEAT100M50
C	405		CEAT470M10
C	406		CCSQCH101J50
C	407		CEAT470M10
C	408		CEAT100M50
C	409		CKSQYB683K25
C	410		CEANP220M10
C	411		CKSQYB823K25
C	412		CEANP100M16
C	413		CEANP100M16
C	414		CKSQYB103K50
C	415		CEANP100M16
C	451		CEJQ221M6R3
C	452		CEJQ221M6R3
C	453		CKSQYB104K25

B

Unit Number : CWM8077(GM-8027ZT/WL)
: CWM8075(GM-8027ZT/E)
: CWM8355(GM-8127ZT/WL)
: CWM8352(GM-8127ZT/EW)
Unit Name : Amp Unit

MISCELLANEOUS

Circuit Symbol	No.	Part Name	Part No.
IC	501	IC	NJM2068MD
IC	502	IC	NJM2068MD
IC	701	IC	NJM2068MD
IC	702	IC	NJM2068MD
IC	703	IC	NJM2068MD
IC	801	IC	PAL006A
IC	802	IC	PAL006A
IC	803	IC	PAL006A
IC	901	IC	NJM2930F08K
IC	902	IC	BA178M05T
IC	903	IC	M51957BFP
Q	801	Transistor	DTA124EK
Q	802	Transistor	DTA124EK
Q	803	Transistor	DTA124EK
Q	831	Chip Transistor	2SC2712
Q	832	Chip Transistor	2SC2712
Q	833	Chip Transistor	2SC2712
Q	903	Transistor	2SC3651
Q	904	Transistor	2SB1260
Q	906	Transistor	2SB1260
Q	907	Transistor	2SA1587
Q	909	Transistor	DTC114EK
Q	910	Transistor	DTA114EK
Q	911	Transistor	2SD1757K
Q	912	Transistor	DTC114EK
Q	913	Transistor	DTC144EK
Q	915	Transistor	DTA114TK
Q	916	Transistor	2SA1162
Q	950	Chip Transistor	2SC2712
D	901	Diode	RM4LFJ10
D	902	Diode	1SS355
D	904	Diode	1SS355
D	905	Diode	ERA15-02VH
D	906	Diode	UDZS5R6(B)
D	907	Diode	HZU4R3(B3)
D	909	Diode	MA152WK
D	910	Diode	1SS355
D	911	Diode	MA152WK
D	916	Diode	UDZS18(B)
D	917	Diode	UDZS18(B)
D	950	Diode	UDZS7R5(B)
L	901	Choke Coil 260mH	CTH1240

RESISTORS

Circuit Symbol	No.	Part Name	Part No.
R	501		RS1/10S103J
R	502		RS1/10S103J
R	503		RS1/10S103J
R	504		RS1/10S103J
R	505		RS1/10S472J
R	506		RS1/10S472J
R	507		RS1/10S472J
R	508		RS1/10S472J
R	509		RS1/10S822J
R	510		RS1/10S822J
R	511		RS1/10S822J
R	512		RS1/10S822J
R	517		RS1/10S153J
R	518		RS1/10S153J
R	519		RS1/10S153J
R	520		RS1/10S153J
R	521		RS1/10S101J
R	522		RS1/10S101J
R	523		RS1/10S101J
R	524		RS1/10S101J
R	701		RS1/10S223J
R	702		RS1/10S223J
R	703		RS1/10S223J
R	704		RS1/10S223J
R	705		RS1/10S303J
R	706		RS1/10S303J
R	707		RS1/10S223J
R	708		RS1/10S223J
R	709		RS1/10S123J
R	710		RS1/10S123J
R	711	(GM-8027ZT/WL)	RS1/10S103J
R	711	(GM-8127ZT/WL,GM-8127ZT/EW)	RS1/10S392J
R	711	(GM-8027ZT/E)	RS1/10S472J
R	712	(GM-8027ZT/WL)	RS1/10S103J
R	712	(GM-8127ZT/WL,GM-8127ZT/EW)	RS1/10S392J
R	712	(GM-8027ZT/E)	RS1/10S472J
R	713		RS1/10S223J
R	714	(GM-8027ZT/WL,GM-8127ZT/WL)	RS1/10S223J
R	714	(GM-8027ZT/E)	RS1/10S183J
R	714	(GM-8127ZT/EW)	RS1/10S153J
R	715	(GM-8027ZT/WL,GM-8127ZT/WL,GM-8127ZT/EW)	RS1/10S151J
R	715	(GM-8027ZT/E)	RS1/10S471J
R	716	(GM-8027ZT/WL,GM-8127ZT/WL,GM-8127ZT/EW)	RS1/10S151J
R	716	(GM-8027ZT/E)	RS1/10S471J
R	717	(GM-8027ZT/WL,GM-8127ZT/WL,GM-8127ZT/EW)	RS1/10S392J
R	717	(GM-8027ZT/E)	RS1/10S332J
R	718	(GM-8027ZT/WL,GM-8127ZT/WL,GM-8127ZT/EW)	RS1/10S392J
R	718	(GM-8027ZT/E)	RS1/10S332J
R	719		RS1/10S221J
R	721		RS1/10S474J

=====Circuit Symbol and No.===Part Name Part No.

Symbol	No.	Part Name	Part No.
R	722		RS1/10S474J
R	723		RS1/10S101J
R	724		RS1/10S101J
R	725		RS1/10S101J
R	726		RS1/10S101J
R	727		RS1/10S101J
R	731	(GM-8027ZT/WL,GM-8127ZT/WL)	RS1/10S472J
R	731	(GM-8027ZT/E,GM-8127ZT/EW)	RS1/10S182J
R	732	(GM-8027ZT/WL,GM-8127ZT/WL)	RS1/10S472J
R	732	(GM-8027ZT/E,GM-8127ZT/EW)	RS1/10S182J
R	733	(GM-8027ZT/WL,GM-8027ZT/E)	RS1/10S102J
R	733	(GM-8127ZT/WL,GM-8127ZT/EW)	RS1/10S272J
R	734	(GM-8027ZT/WL,GM-8027ZT/E)	RS1/10S102J
R	734	(GM-8127ZT/WL,GM-8127ZT/EW)	RS1/10S272J
R	735	(GM-8027ZT/WL,GM-8127ZT/WL)	RS1/10S122J
R	735	(GM-8027ZT/E)	RS1/10S182J
R	735	(GM-8127ZT/EW)	RS1/10S222J
R	736		RS1/10S223J
R	801		RS1/10S184J
R	802		RS1/10S184J
R	803		RS1/10S184J
R	831		RS1/10S271J
R	832		RS1/10S271J
R	833		RS1/10S271J
R	834		RS1/10S472J
R	835		RS1/10S472J
R	836		RS1/10S472J
R	901		RS1/10S472J
R	902		RS1/8S222J
R	907		RS1/10S153J
R	908		RS1/10S6R8J
R	909		RS1/10S103J
R	910		RS1/10S181J
R	911		RS1/10S103J
R	912		RS1/10S391J
R	914		RS1/10S221J
R	916		RS1/8S121J
R	917		RS1/8S151J
R	918		RS1/8S222J
R	919		RS1/8S222J
R	921		RS1/10S474J
R	924		RS1/10S471J
R	928		RN1/10SE1102D
R	929		RN1/10SE1801D
R	930		RS1/10S222J
R	931		RS1/10S103J
R	932		RS1/10S333J
R	933		RS1/10S333J
R	934		RS1/10S272J
R	935		RS1/10S183J
R	936		RS1/10S103J
R	937		RS1/4S101J
R	938		RS1/4S101J
R	939		RS1/10S432J
R	940		RS1/10S512J
R	950		RS1/8S272J
R	951		RS1/10S182J
R	952		RS1/10S183J

CAPACITORS

Symbol	No.	Part Name	Part No.
C	501		CEAT4R7M50
C	502		CEAT4R7M50
C	503		CEAT4R7M50
C	504		CEAT4R7M50
C	505		CCSQCH101J50
C	506		CCSQCH101J50
C	507		CCSQCH101J50
C	508		CCSQCH101J50
C	509		CKSQYB473K25
C	510		CKSQYB473K25
C	701		CCSQCH101J50
C	702		CCSQCH101J50
C	703	(GM-8027ZT/WL)	CCSQCH101J50
C	703	(GM-8027ZT/E)	CCSQCH221J50
C	703	(GM-8127ZT/WL,GM-8127ZT/EW)	CCSQCH271J50
C	704	(GM-8027ZT/WL)	CCSQCH101J50
C	704	(GM-8027ZT/E)	CCSQCH221J50
C	704	(GM-8127ZT/WL,GM-8127ZT/EW)	CCSQCH271J50
C	705	(GM-8027ZT/WL,GM-8127ZT/WL,GM-8027ZT/E)	CKSQYB682K50
C	705	(GM-8127ZT/EW)	CKSQYB103K50
C	706		CKSQYB473K25
C	707		CKSQYB224K16
C	708		CKSQYB473K25
C	709		CKSQYB473K25
C	710		CKSQYB473K25
C	801		CFTNA224J50
C	802		CFTNA224J50
C	803		CFTNA224J50
C	804		CFTNA224J50
C	805		CFTNA224J50
C	806		CFTNA224J50
C	807		CFTNA224J50
C	808		CFTNA224J50
C	809		CFTNA224J50
C	810		CFTNA224J50
C	811		CFTNA224J50
C	812		CFTNA224J50
C	813		CFTNA105J50
C	814		CFTNA105J50
C	815		CFTNA105J50
C	816		CEAT100M50
C	817		CEAT100M50
C	818		CEAT100M50
C	822		CEHAT221M25
C	823		CKSQYB104K25
C	824		CEHAT221M25
C	825		CKSQYB104K25
C	826		CEHAT221M25
C	827		CKSQYB104K25
C	901	6800μF/16V	CCH1390
C	902		CEAT1R0M50
C	903		CEAT471M25
C	904		CKSQYB473K25
C	905		CEAT221M10
C	906		CEAT1R0M50
C	907	100μF/10V	CCH1282
C	908	100μF/10V	CCH1282
C	909		CKSQYB473K25
C	910		CEAT221M10
C	911		CKSQYB473K25
C	912		CEHAT1R0M50
C	913	100μF/10V	CCH1282
C	914		CKSQYB473K25
C	915		CKSQYB103K50
C	916		CKSQYB103K50
C	917		CKSQYB473K25
C	918		CKSQYB224K25
C	919		CKSQYB473K25
C	920		CKSQYB103K50
C	921		CEAT1R0M50

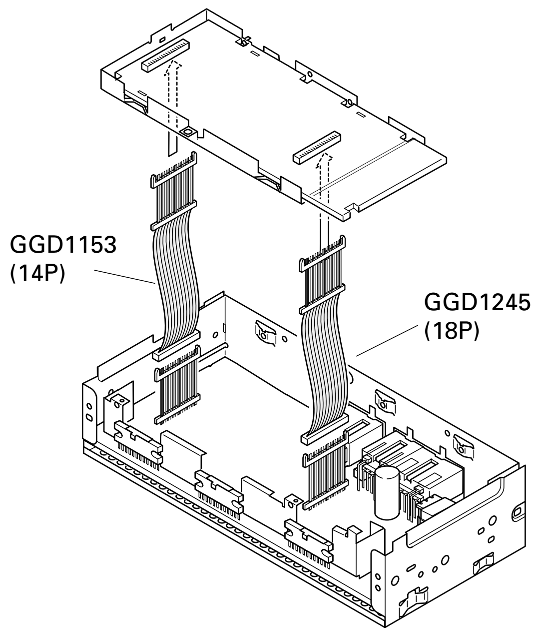
Circuit Symbol	No.	Part Name	Part No.
C	922		CKSQYB473K25
C	923		CEAT4R7M50
C	924		CKSQYB471K50
C	925		CKSQYB104K25
C	928		CSZSR3R3M35
C	930		CKSQYB392K50
C	931		CKSQYB392K50
C	932		CKSQYB392K50
C	933		CKSQYB392K50
C	934		CKSQYB392K50
C	935		CKSQYB392K50
C	936		CKSQYB392K50
C	937		CKSQYB392K50
C	938		CKSQYB392K50
C	939		CKSQYB392K50
C	940		CKSQYB392K50
C	941		CKSQYB392K50
C	942		CKSQYB392K50
C	943		CKSQYB392K50
C	944		CKSQYB392K50
C	945		CKSQYB392K50
C	952		CKSQYB221K50
C	953		CKSQYB221K50
C	954		CKSQYB221K50
C	955		CKSQYB221K50
C	960		CKSQYB221K50
C	961		CKSQYB221K50

C Unit Number : CWM8205
Unit Name : Microphone Unit

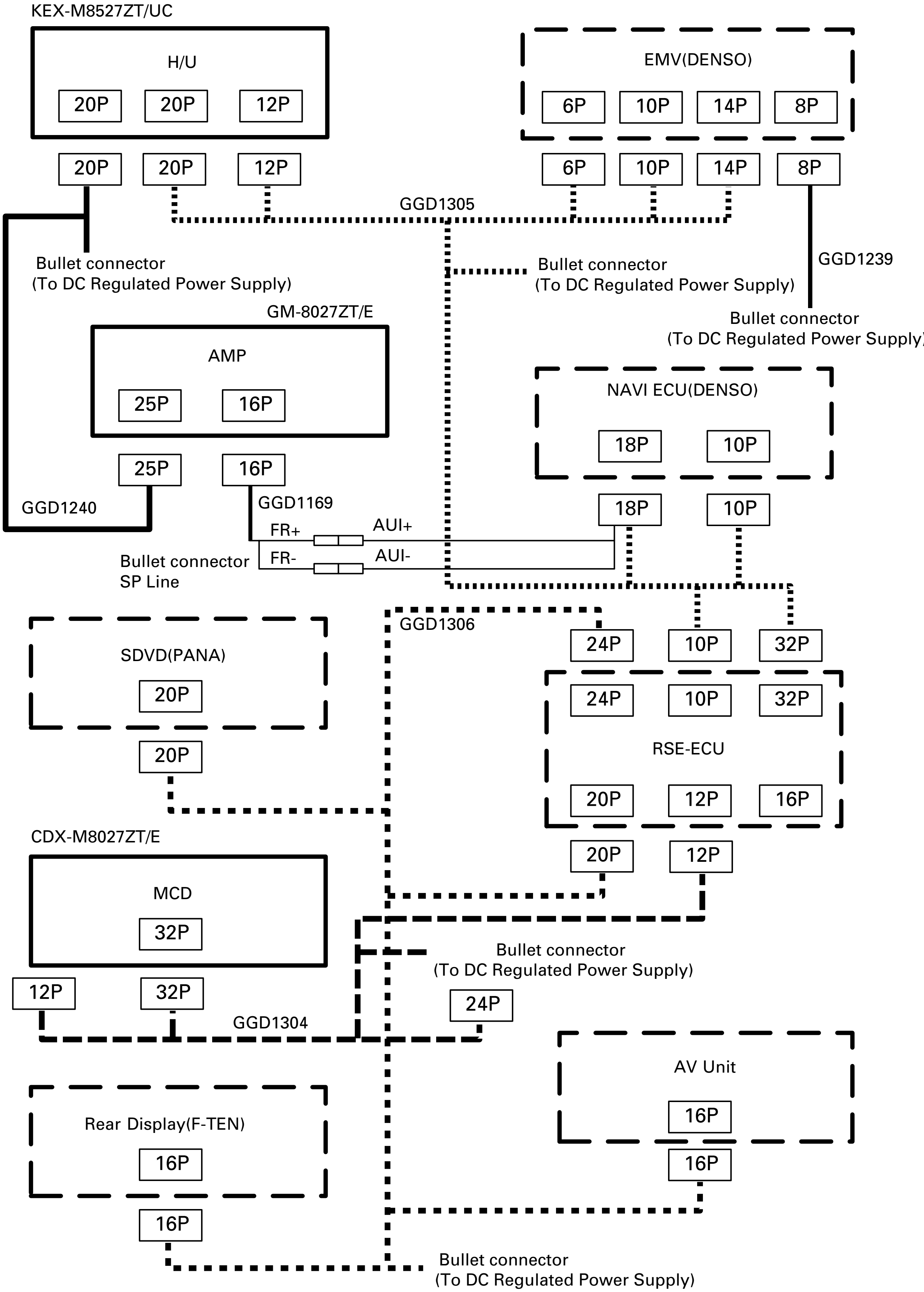
Circuit Symbol	No.	Part Name	Part No.
MIC	401	Microphone	CPM1011

6. ADJUSTMENT

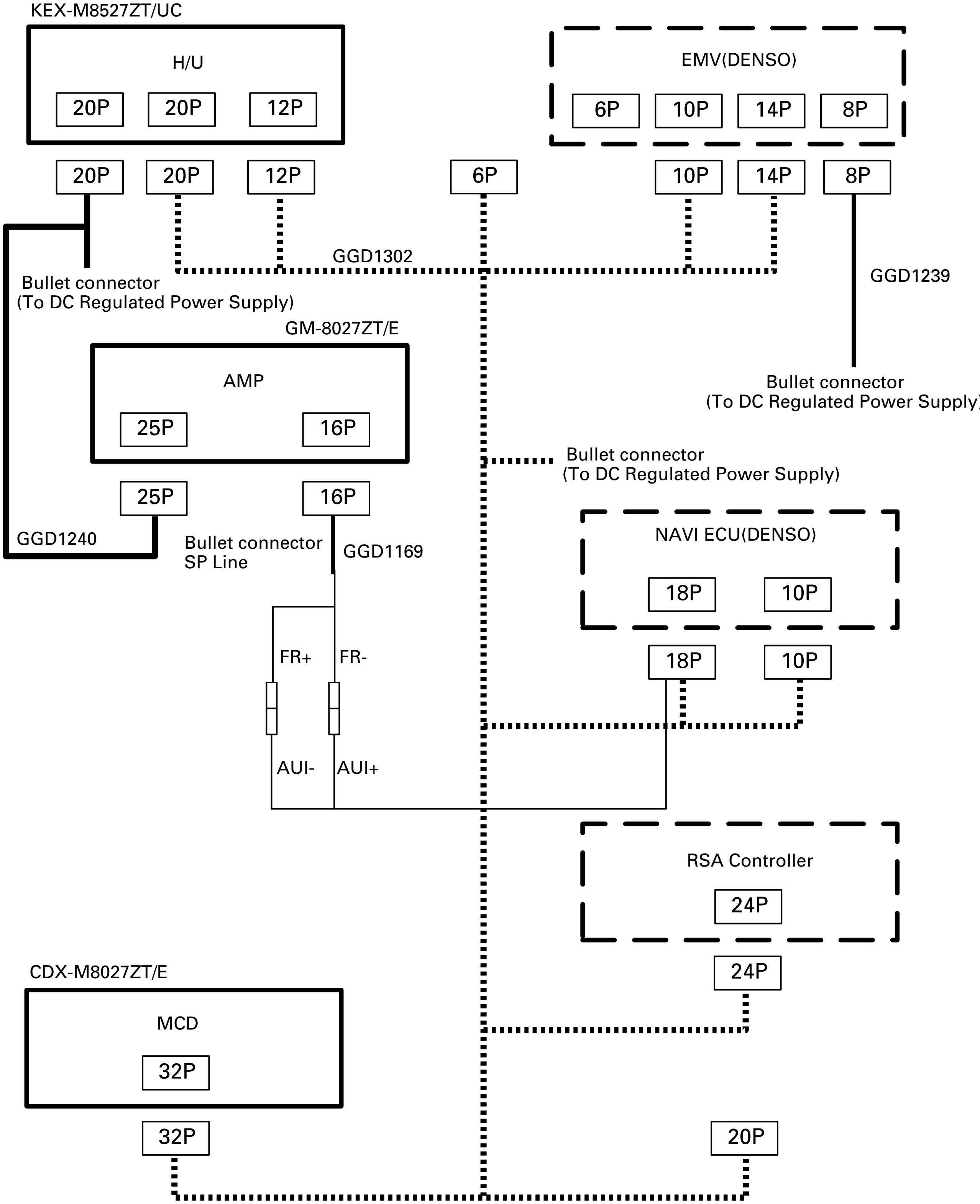
● Jigs



● Connection Diagram

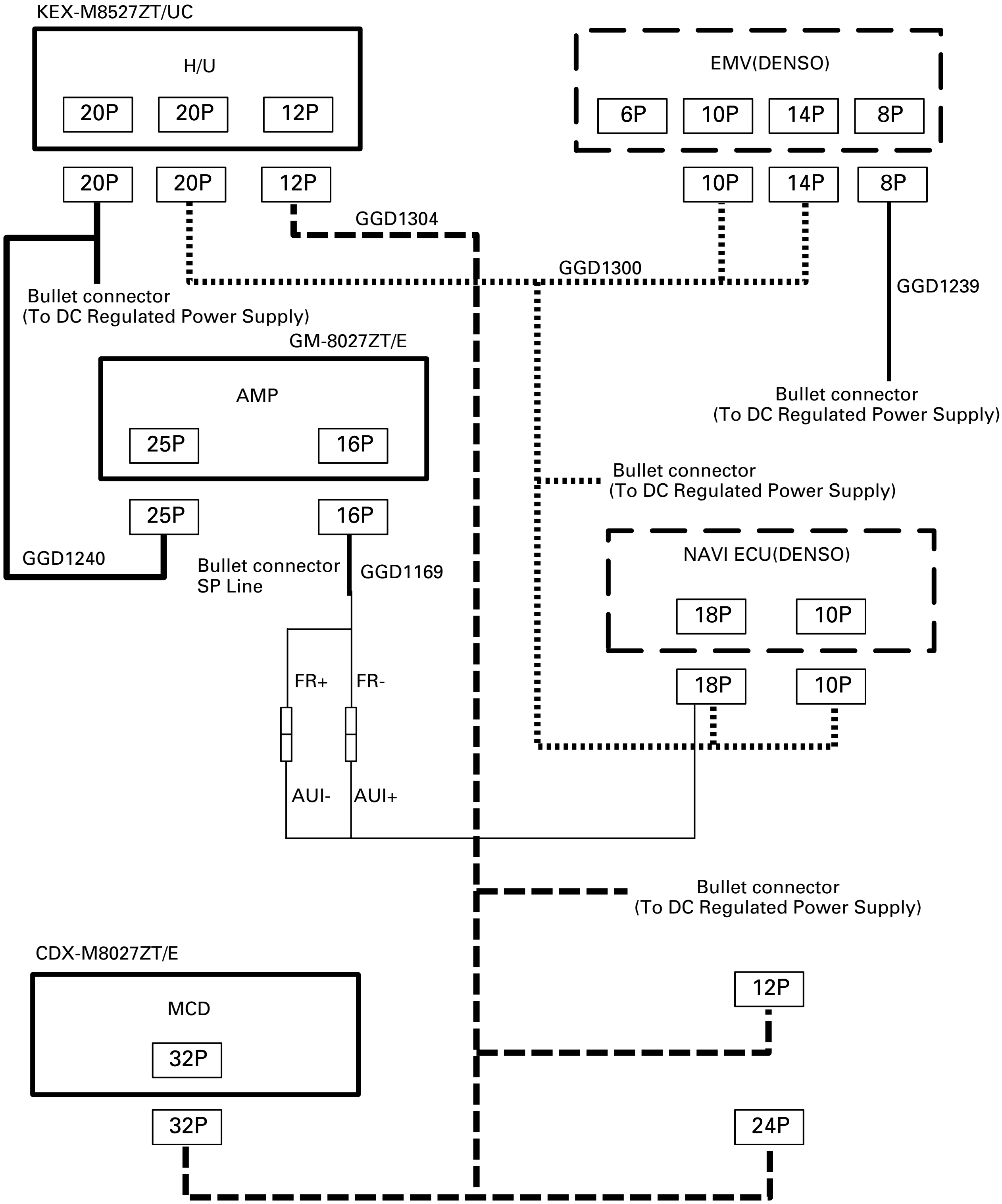


● Connection Diagram



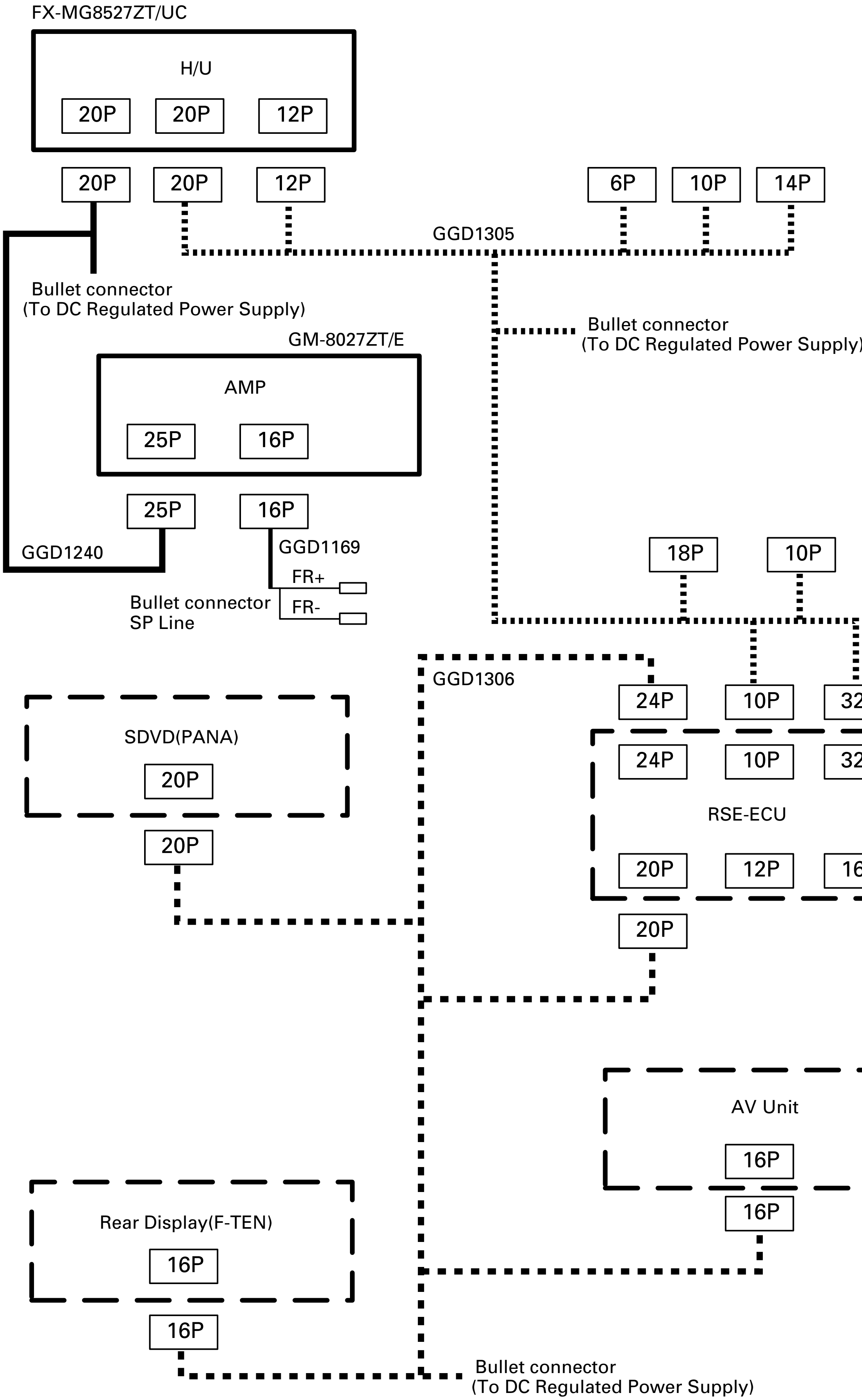
*Please connect only one Multi CD at the same time
*MCD does not operate if RSA controller is not connected.

● Connection Diagram

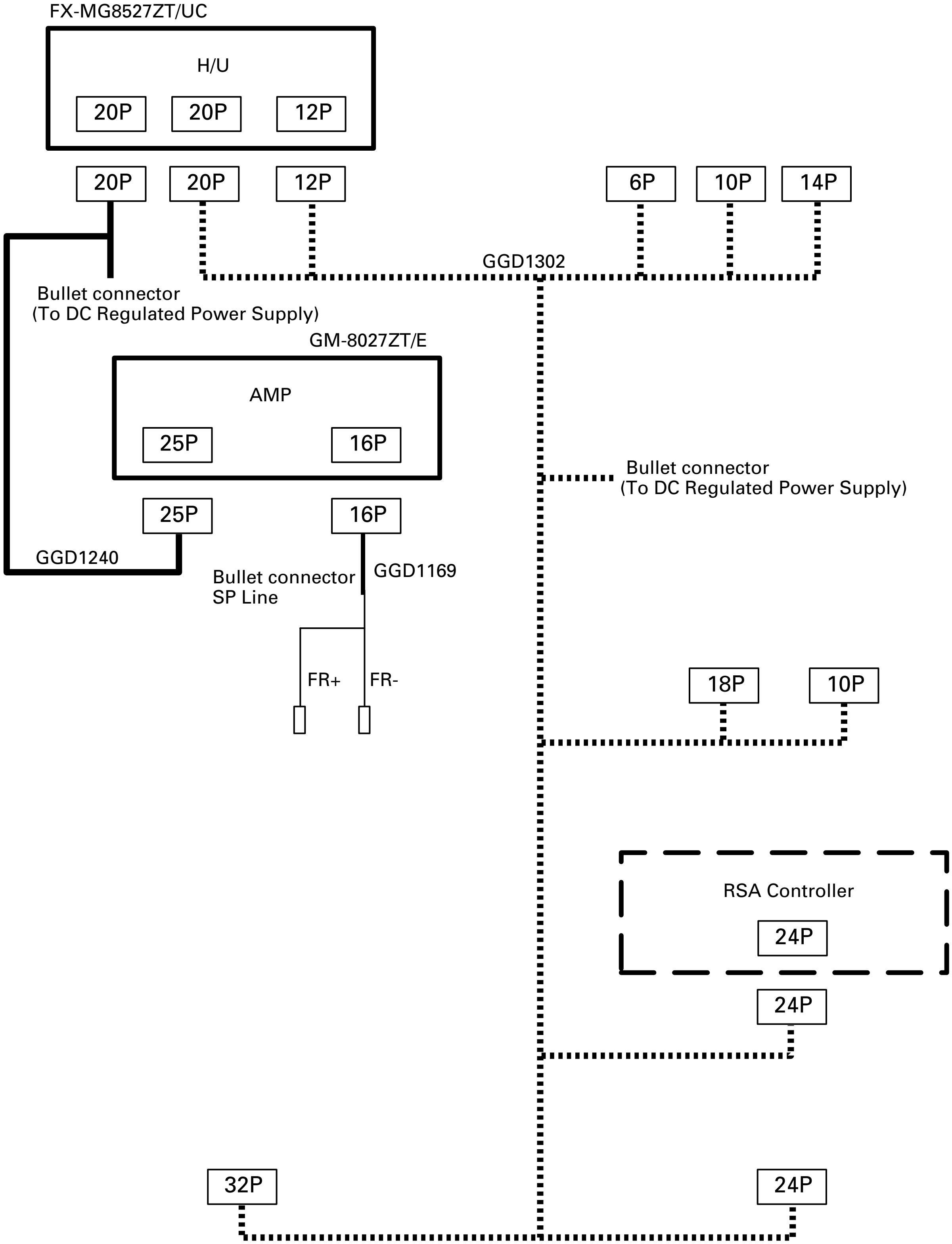


*Please connect only one Multi CD at the same time

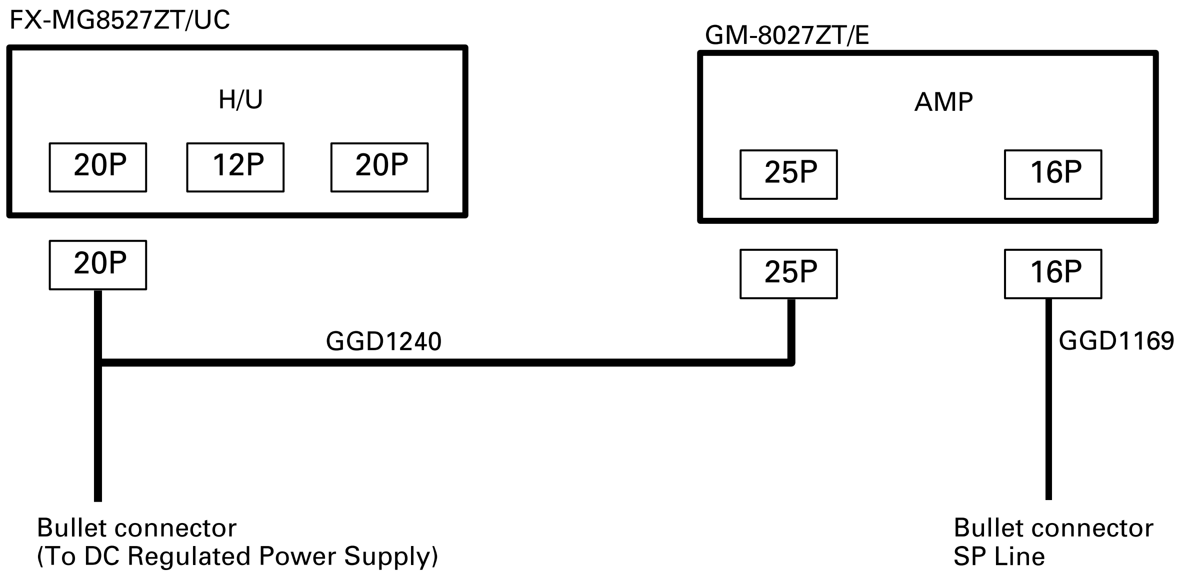
● Connection Diagram



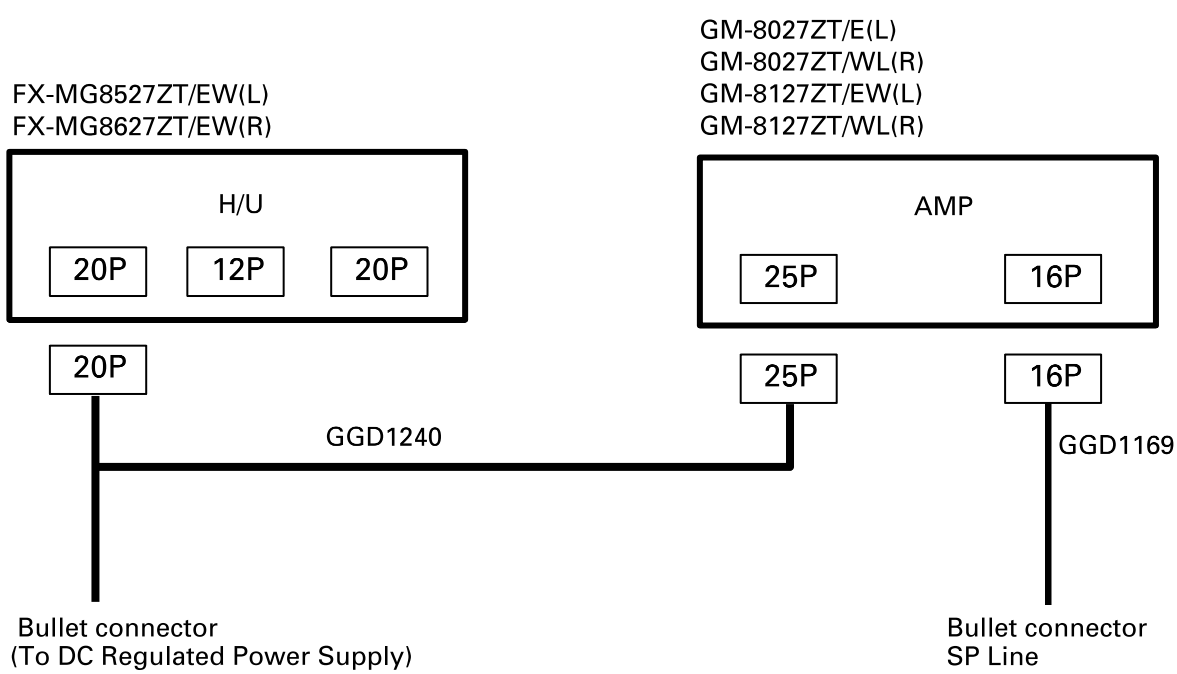
Connection Diagram



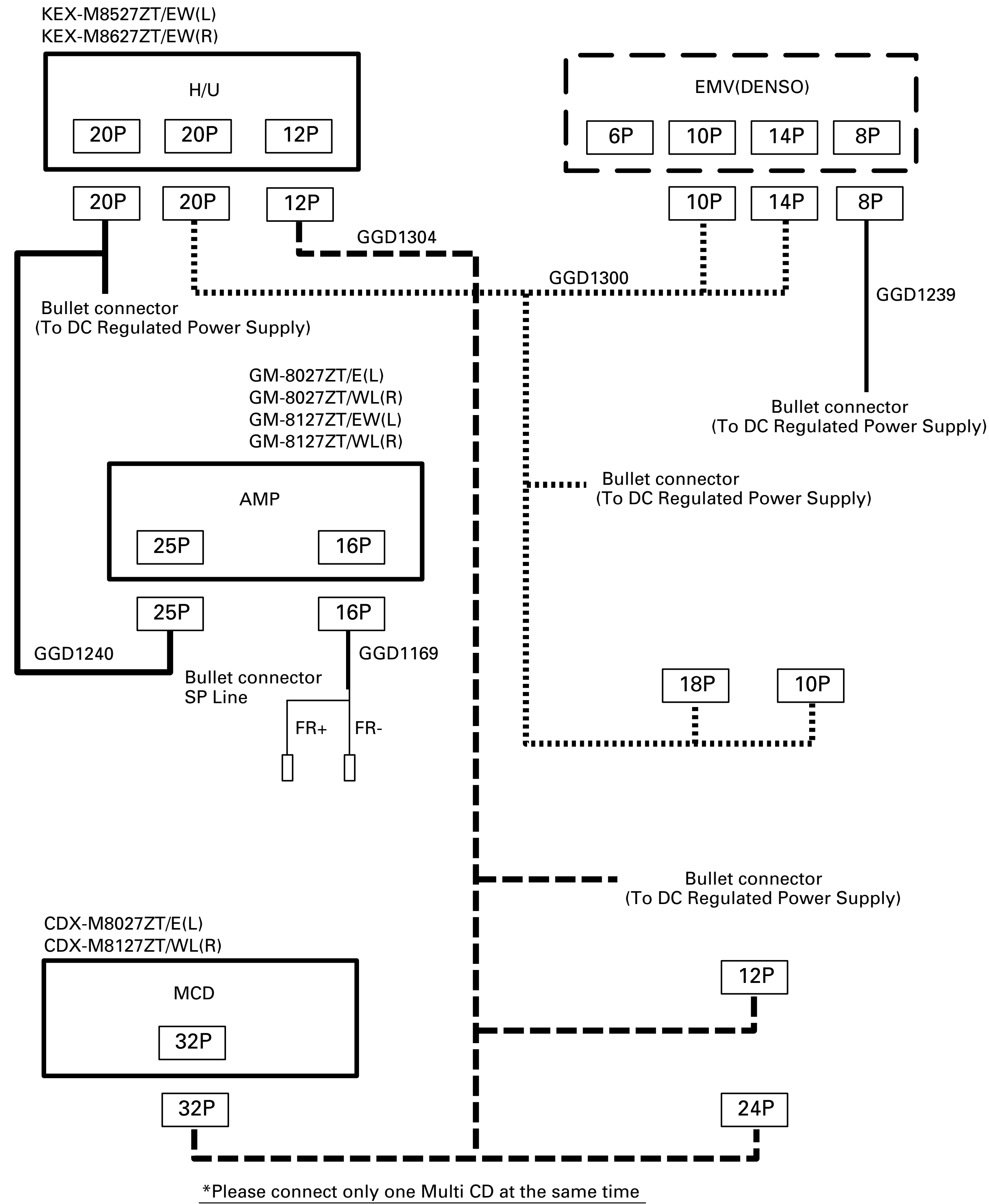
● Connection Diagram



● Connection Diagram



Connection Diagram

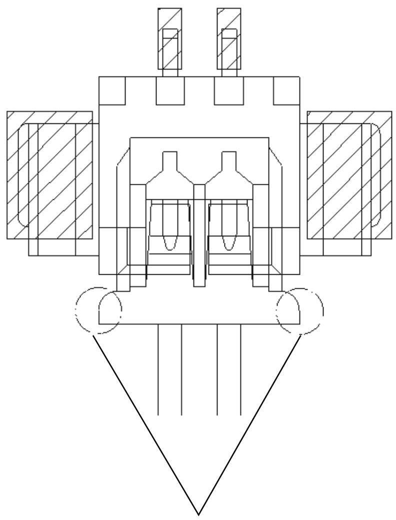


6.1 ASL SECTION ADJUSTMENT

Note:

1) Only if ASL parts (shaded ones below) get changed, you need adjustments for ASL.
2) When you disconnect the connector for ASL, you need to be careful.
Refer to the sentence and the figure below.

When you disconnect the Cord Assy (CDE6990) that connects between DSP PCB and Microphone PCB, get your hand on the connector.
Never pull the cable directly because it's very week and easy to be cut.



Hook your pointed fingers' nail, and you can disconnect it easily.

Preset conditions

1. Set VR401 around the center of the adjustable range.

Input (MIC)	Output (Pin 74 : test point "ASL1")	Adjustment Adj.point	 Spec.
By using the jig(CAN-906,CAN-912), apply a sine wave of 100dBSPL voltage directly to the MIC terminal. (Close up as much as possible.)	Observe the output at **ALS1** on a audio analyzer (Corresponding to analog meter 7Hz).	VR401	314±30mV

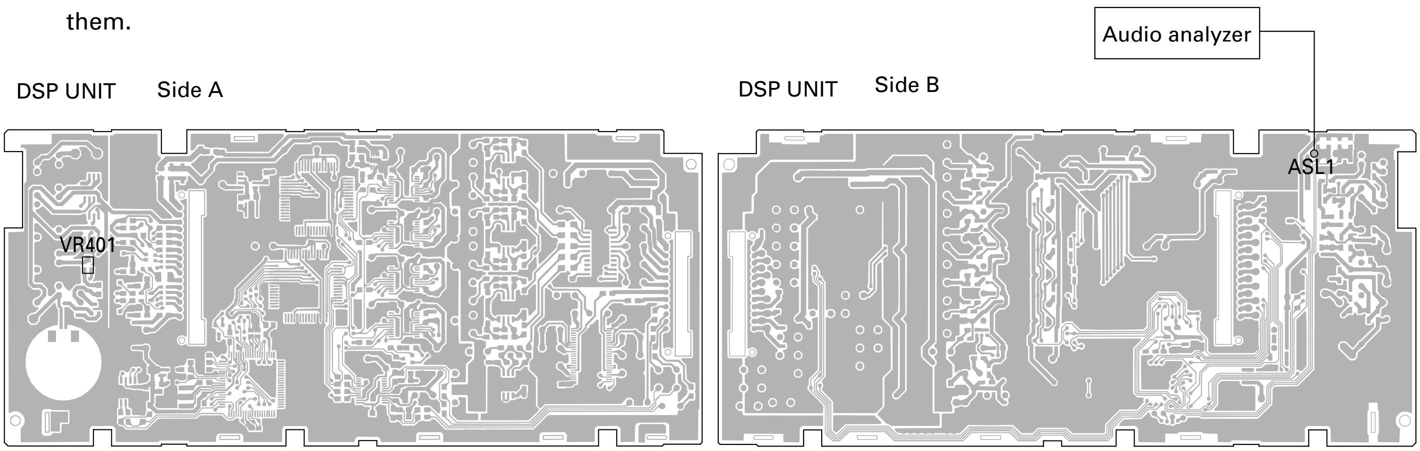
To connect the Amp unit and the DSP unit, use Jig GGD1153 and GGD1245.

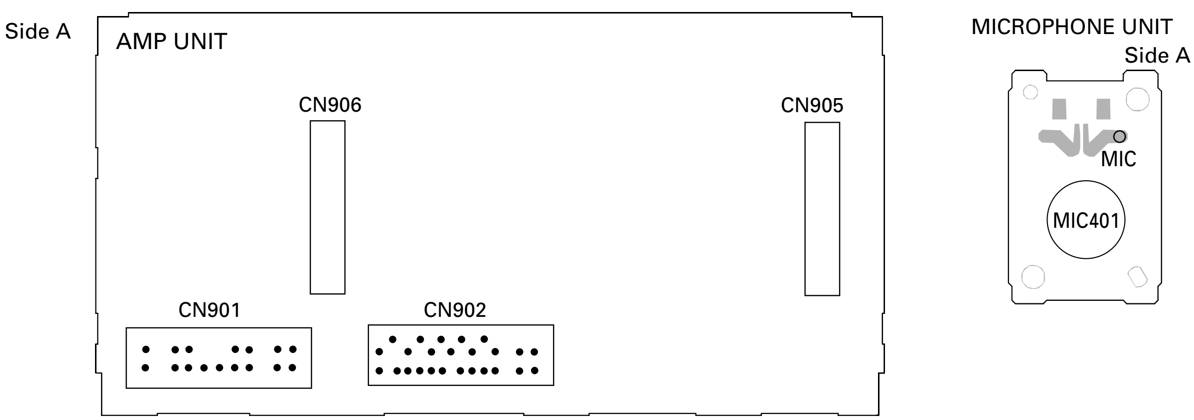
Caution:

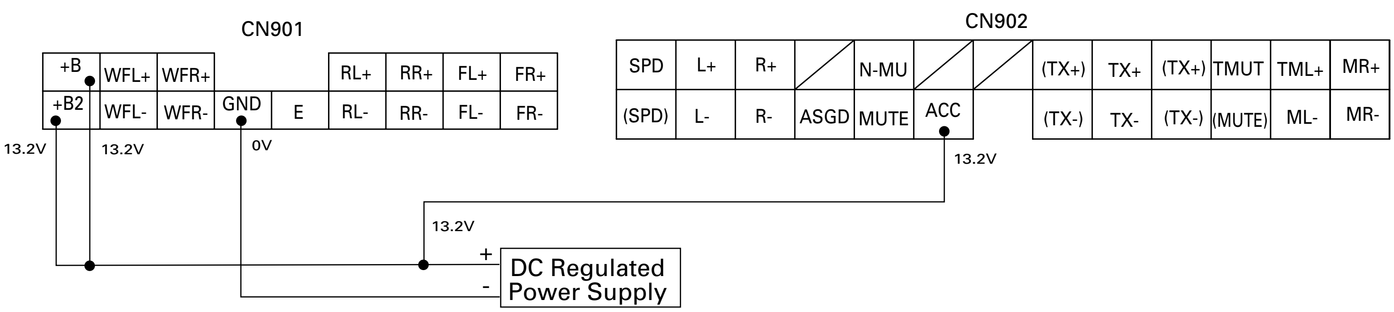
1) Before starting measurement, be sure to perform the initial check for the ASL adjustment jig. (The sound pressure level should be 100dBSPL at the sound emission section.)
2) Note that it may take 20 seconds or more to obtain waveforms, in some cases. Do not switch off the jig soon after starting measurement.

Conditions:

1) This adjustment is sensitive to external shocks or wind. During adjustment, keep away the product and jig from them.







7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● **Removing the Case (Fig.1)**

1 Remove the two screws and then remove the Case.

● **Notes the Cover (Fig.1)**

Never remove the Cover unless you need to do so because it is firmly adhered to the chassis with double-faced tape.
Also, do not reuse the removed Cover and double-faced tape becuase they may probably be damaged.

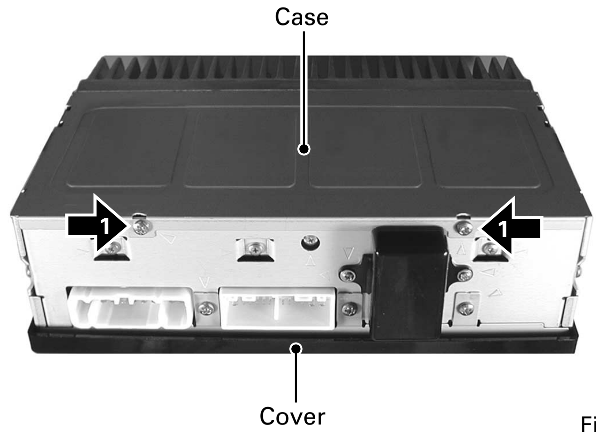


Fig.1

● **Removing the Shield Case (Fig.2)**

1 Remove the two screws.

2 Remove the two screws and then remove the Shield Case with the Cord Assy, Seal and Cover on it.

Notes)
When you install the Cover, put the Cord Assy fully inside the Cover.
(Make the length of the visible part of heat-shrink tube of the Cord Assy to be 1 mm or shorter when the Cover is seen from above the top.)

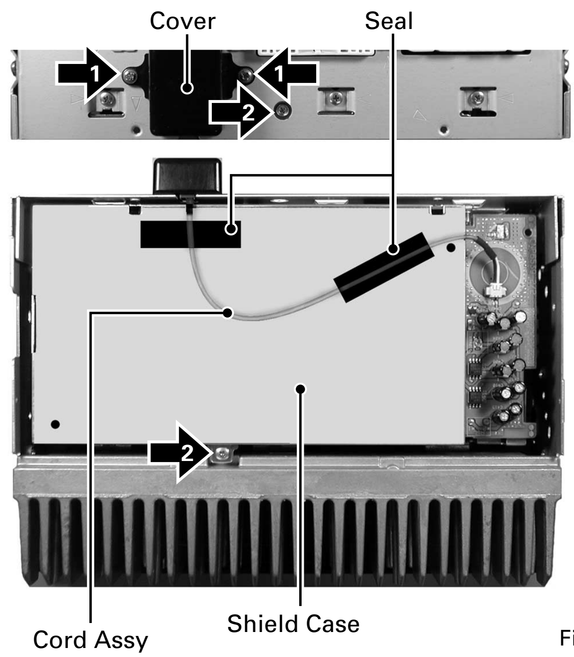


Fig.2

● **Removing the DSP Unit (Fig.3)**

1 Remove the solder and then straight the tabs at three locations indicated.

Remove the DSP Unit

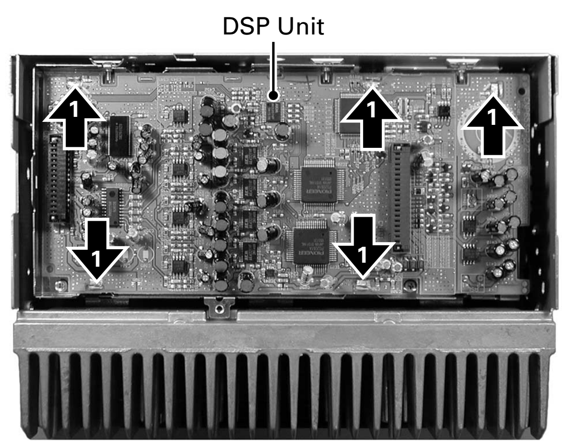


Fig.3

● Removing the Shield Case (Fig.4)

1 Remove the five screws and then remove the Shield Case.

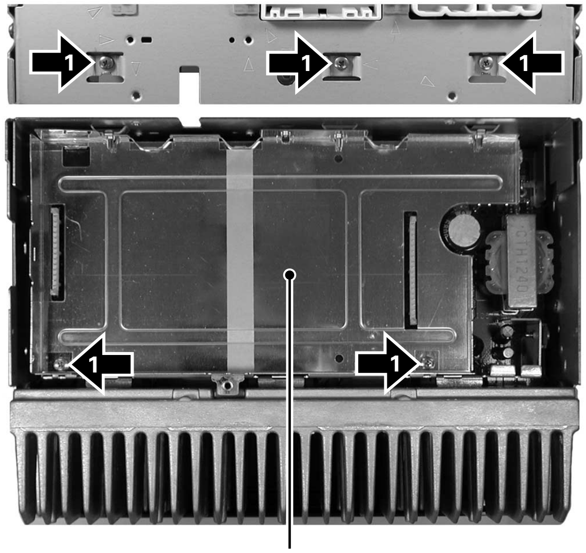


Fig.4

● Removing the Amp Unit (Fig.5)

1 Remove the six screws.

2 Remove the two screws and then remove the Heat Sink.

Notes)
Remove the Heat Sink without removing the Cover in Fig.1.

3 Remove the two screws.

4 Remove the three screws and then remove the Amp Unit.

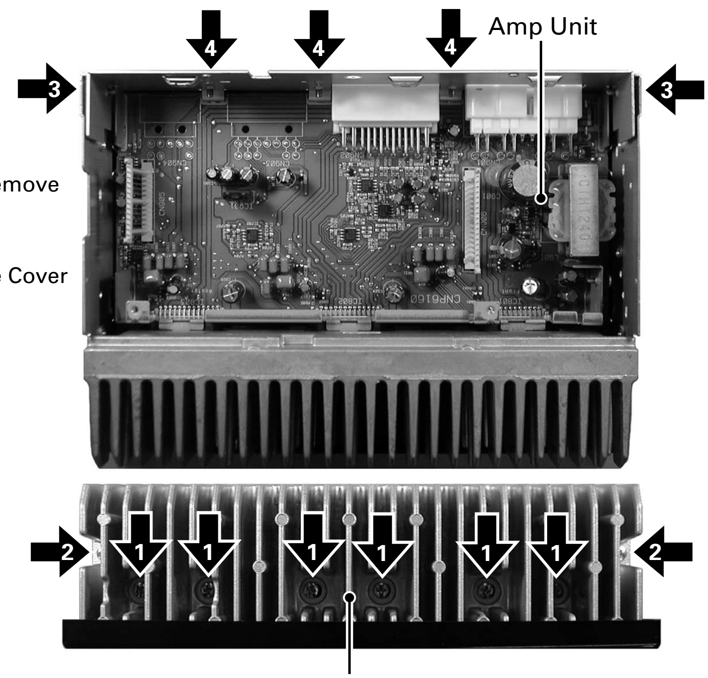
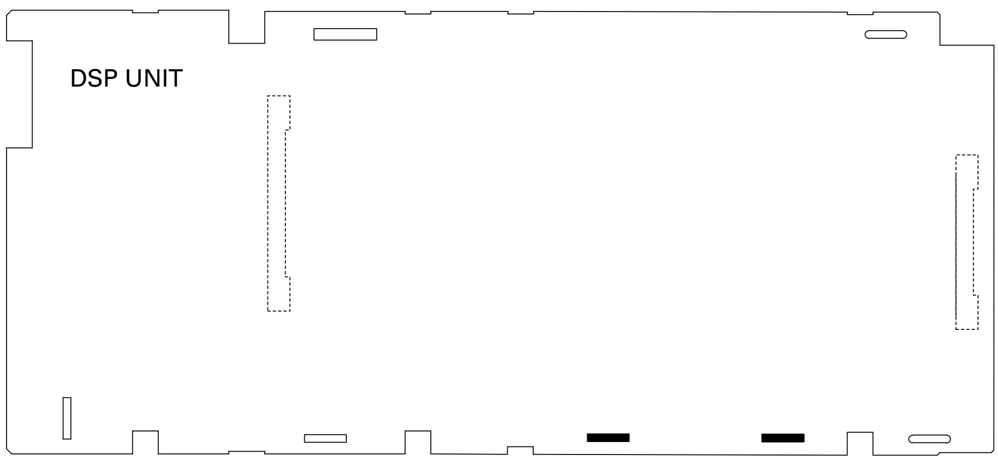


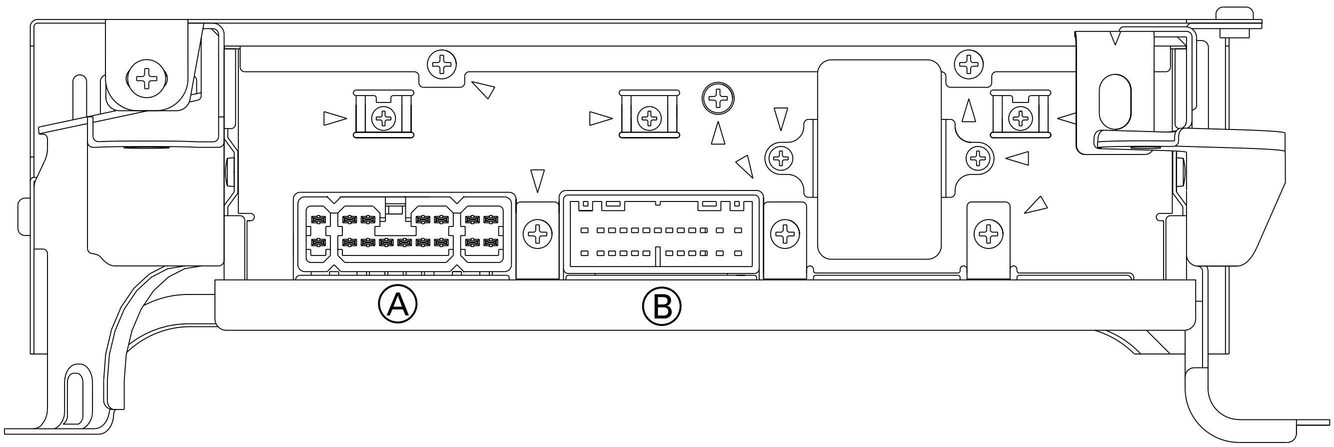
Fig.5

● "Pawl bending and soldering" points of the pawls for securing the base plate of a shielded case (bottom case).

- The portion marked by ▬ is a point in which pawl bending and soldering are not performed. (Faulty pawl bending point)
- The portion marked by ▭ is a point in which pawl bending and soldering are necessary.



7.1.2 CONNECTOR FUNCTION DESCRIPTION



A

+B	WFL+	WFR+			RL+	RR+	FL+	FR+
+B2	WFL-	WFR-	GND	E	RL-	RR-	FL-	FR-

B

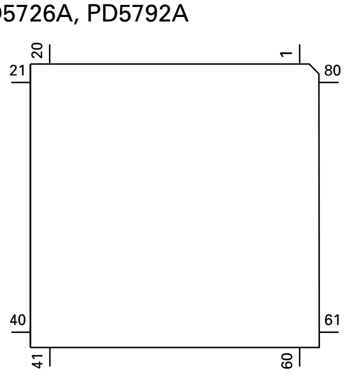
SPD	L+	R+		N-MU			(TX+)	TX+	(TX+)	TMUT	TML+	MR+
(SPD)	L-	R-	ASGD	MUTE	ACC		(TX-)	TX-	(TX-)	(MUTE)	ML-	MR-

7.2 IC

● Pin Functions (PD5726A, PD5792A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	MUTE	O	C	Mute output
2	VCS2	O	C	SN761029 strobe output
3	VCS1	O	C	PM0017AM strobe output
4	VDT	O	C	Data output for electronic volume
5	VCK	O	C	Clock output for electronic volume
6	CVNSS			Connect to VSS
7	MODEL0	I		R handle /L handle select input
8	NC			Not used
9	RESET	I		Reset input
10	XOUT	O		Crystal oscillating element connection pin
11	VSS			GND
12	XIN	I		Crystal oscillating element connection pin
13	VCC			5V
14	NMI			Connect to VCC
15	SPEED	I		Speed sensor pulse input
16	BSENS	I		Back up power sense input
17	ASENS	I		ACC power sense input
18	AVCINT	I		AVC-LAN data input
19	NC			Not used
20	AVCPW	O	C	AVC-LAN driver power supply output
21	PEE	O	C	Beep tone output
22	AVCIN	I		AVC-LAN data input
23	AVCOUT	O	C	AVC-LAN data output
24	DSPOUT	O	C	DSPI/F serial data output
25	DSPIN	I		DSPI/F serial data input
26	DSPCK	O	C	DSPI/F serial clock output
27	TESTIN	I		Test program start input
28	TSOUT	O	C	Test serial data output
29	TSIN	I		Test serial data input
30	TSCK	I		Test serial clock input
31	SMUTEIN	I		System mute input
32-62	NC			Not used
63	THROU	I		LOW fixed terminal
64	CALIB	O	C	Power IC control output
65	PWSENS	I		Power IC heat sense input
66	SYSPW1	O	C	System power output
67	DSPRST	O	C	DSP hard reset output
68	DSPERR	I		DSP error detect input
69	DSPCS2	O	C	TC9332F chip select 2
70	DSPCS1	O	C	TC9332F chip select 1
71	DSPACK	I		DSP-IC ACK input
72	DSPCD	O		DSP command/data output
73	DPD	O	C	AD/DAC calibration output
74	ASLIN1	I		Difference of noise and signal input 1
75	AVSS			VSS
76	ASLIN2	I		Difference of noise and signal input 2
77	VREF	I		A/D converter reference voltage input
78	AVCC			VCC
79	NAVMUTE	I		Navigation mute input
80	DSPMUTE	O	C	DSP mute output

*PD5726A, PD5792A



IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

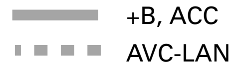
Format	Meaning
C	C MOS

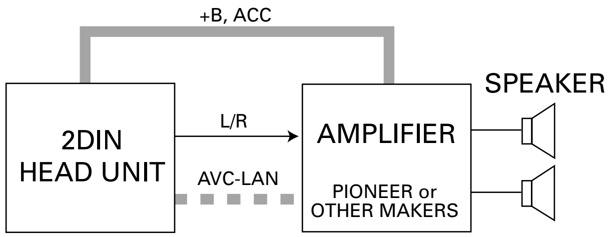
7.3 EXPLANATION

7.3.1 SYSTEM BLOCK DIAGRAM

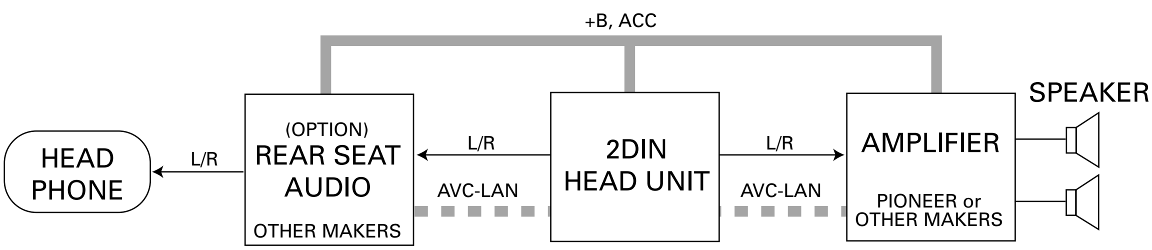
1. 2DIN

1-① 2DIN

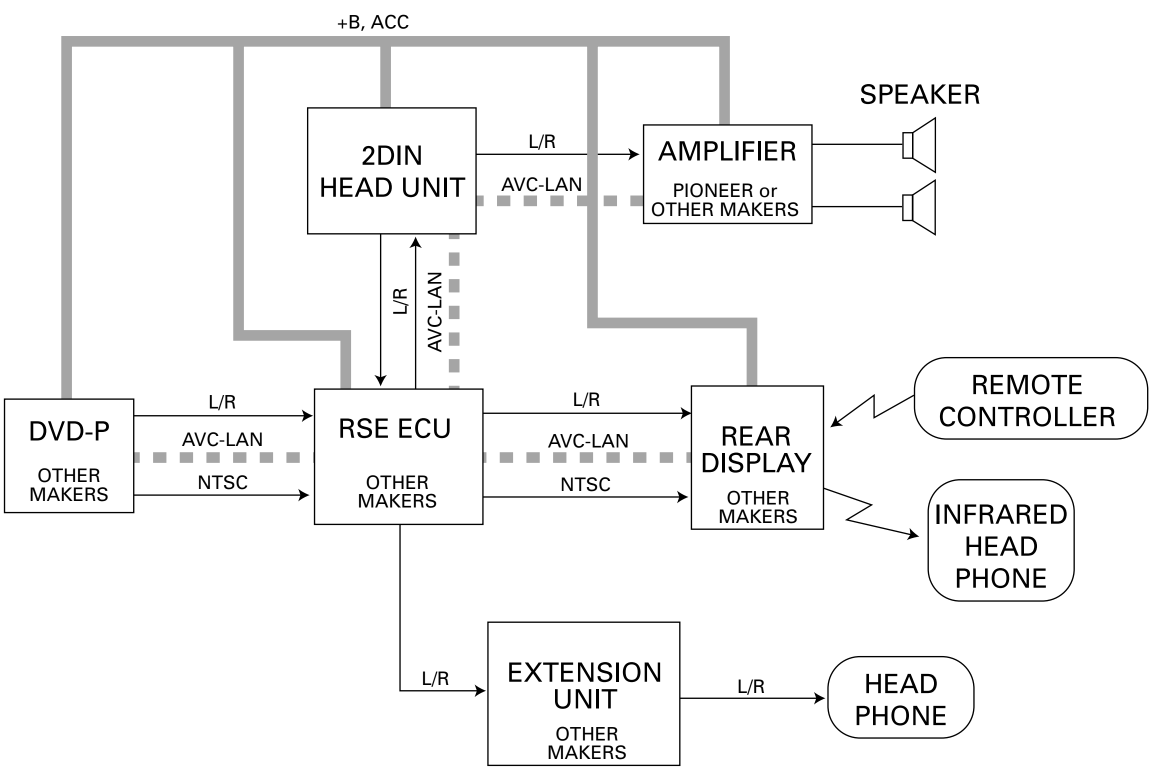




1-② 2DIN RSA (OPTION)

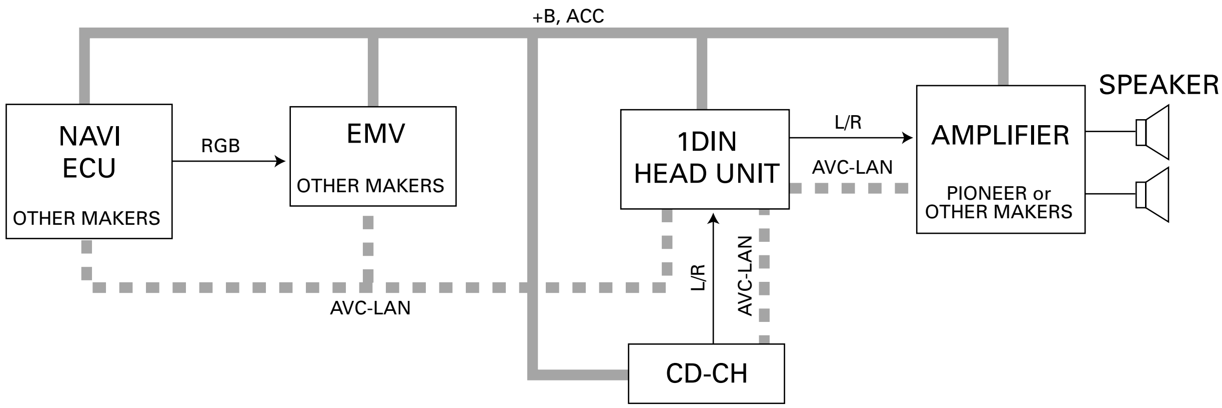


1-③ 2DIN RSE (OPTION)

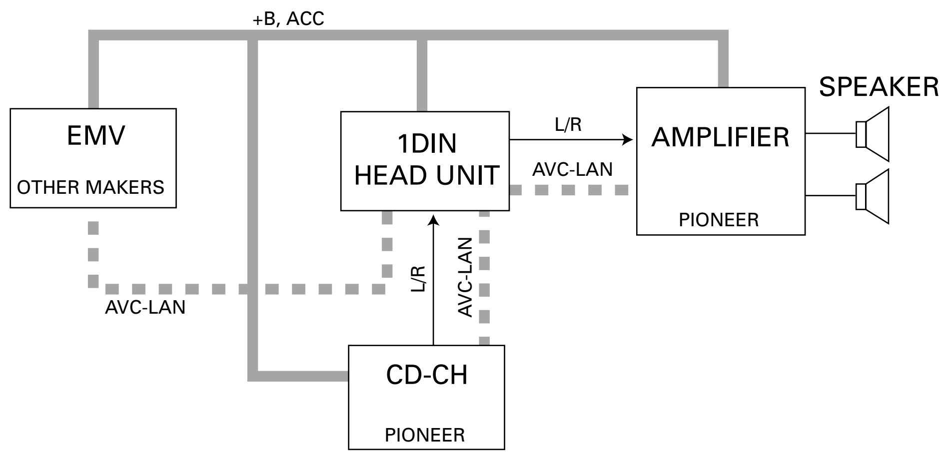


2. 1DIN

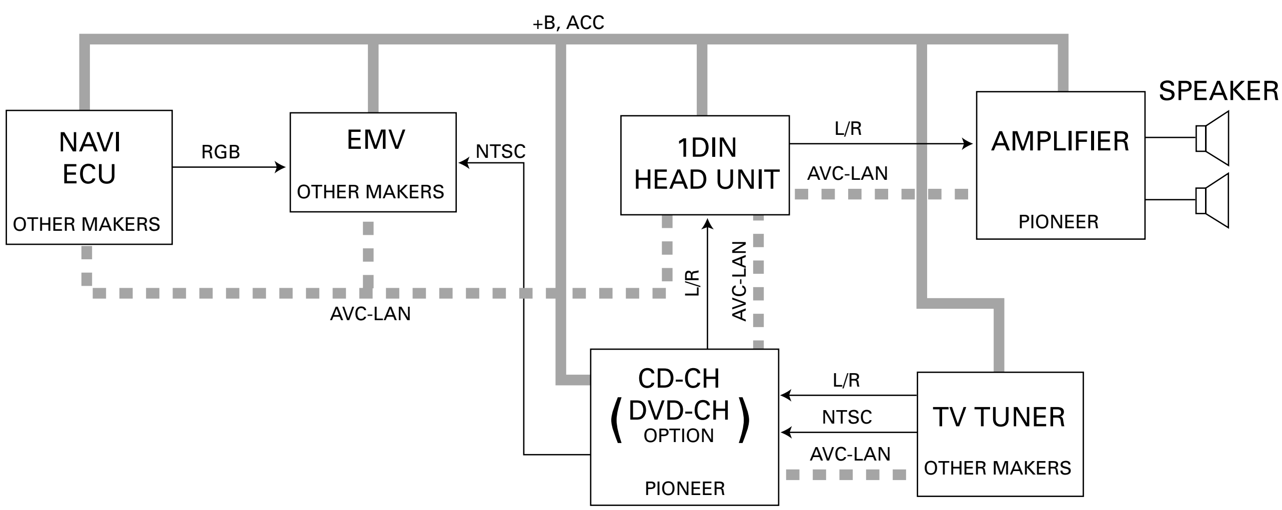
2-① 1DIN



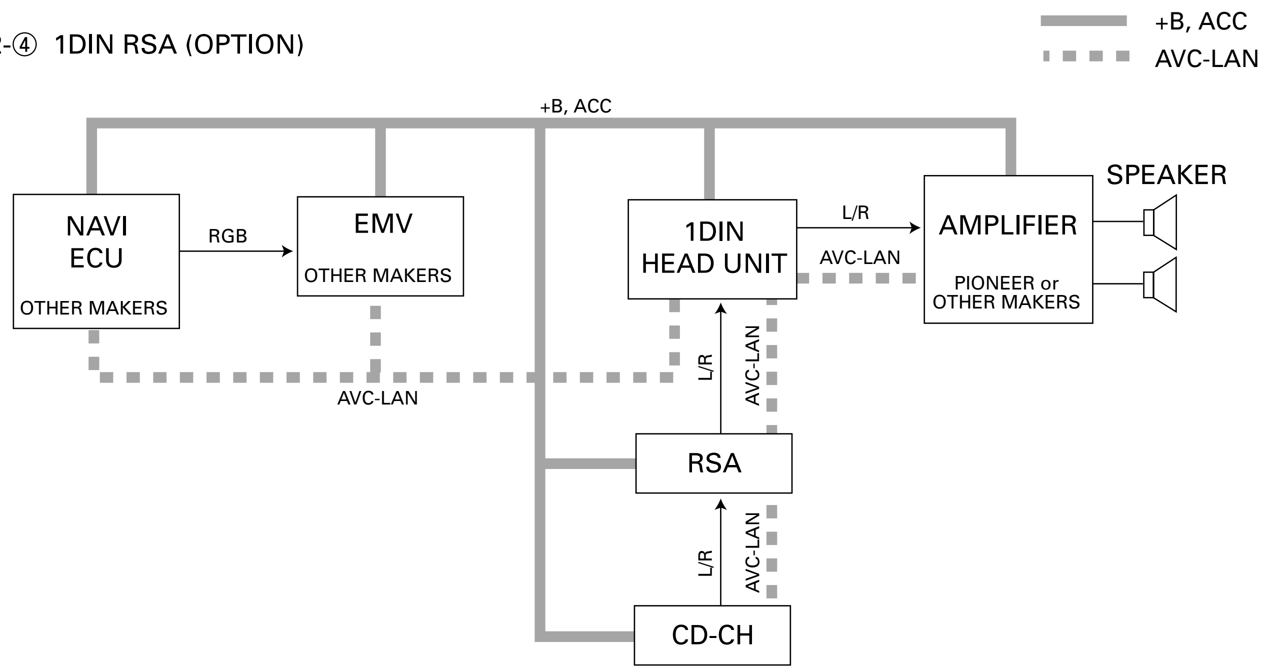
2-② 1DIN



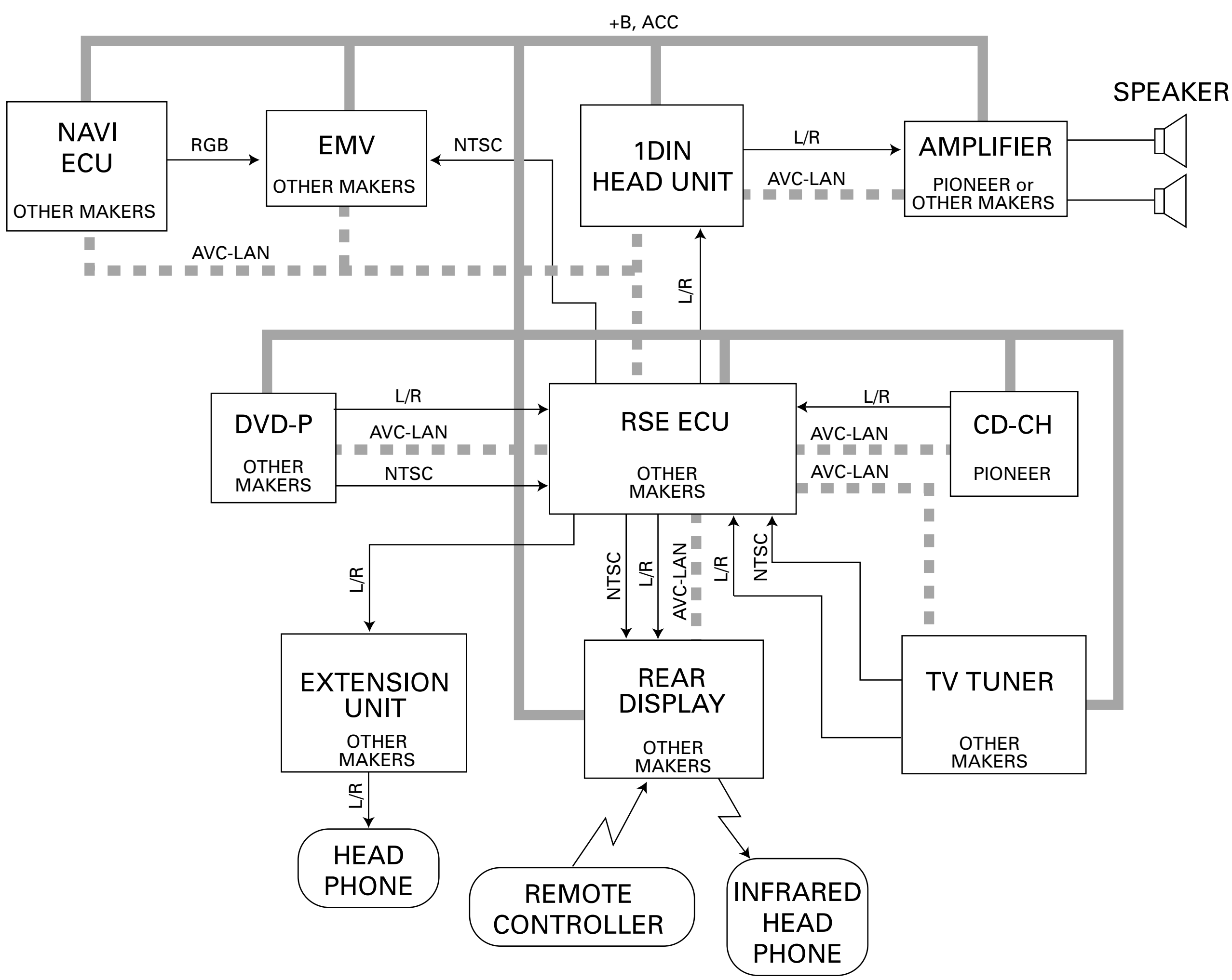
2-③ 1DIN



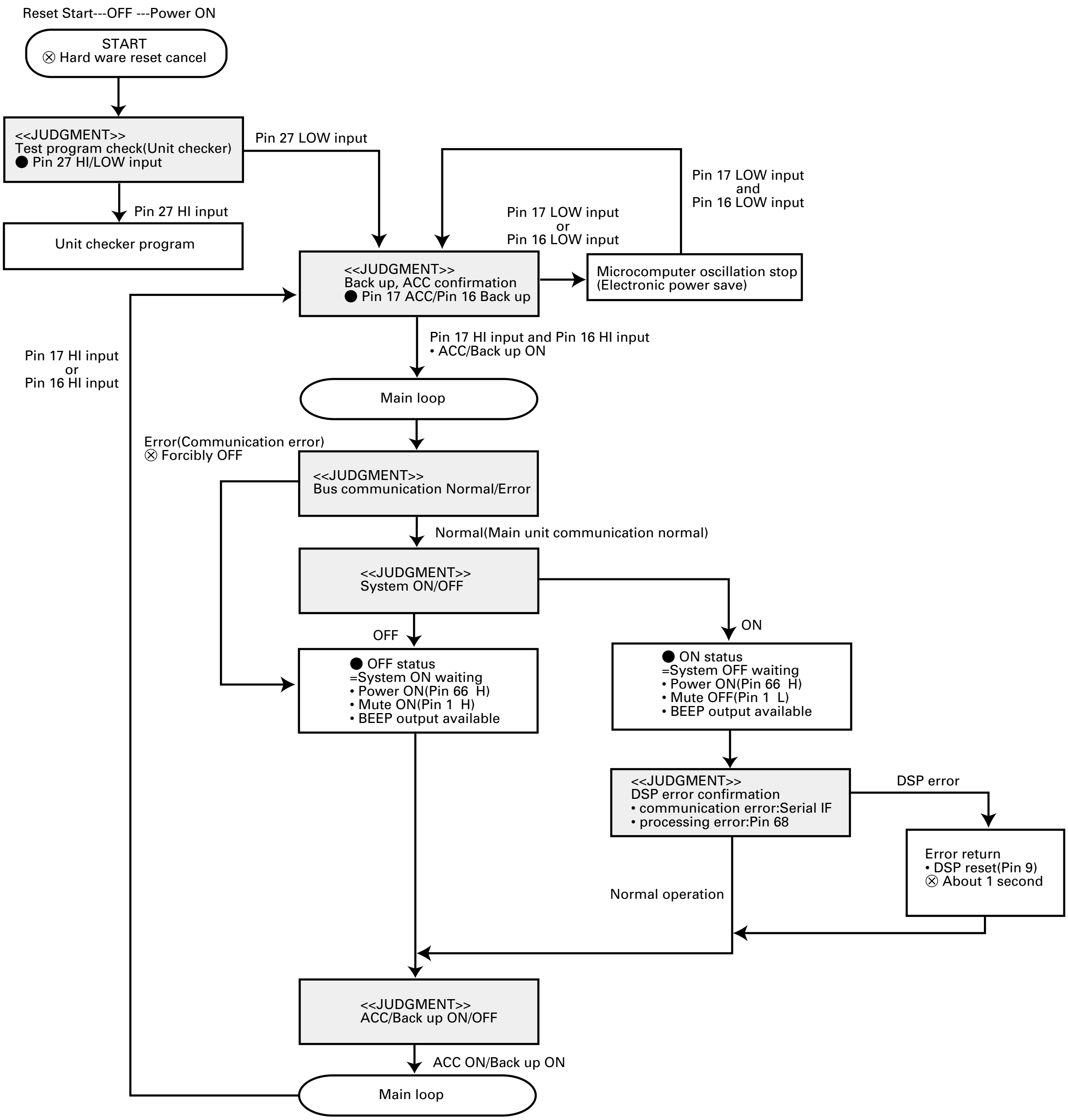
2-④ 1DIN RSA (OPTION)



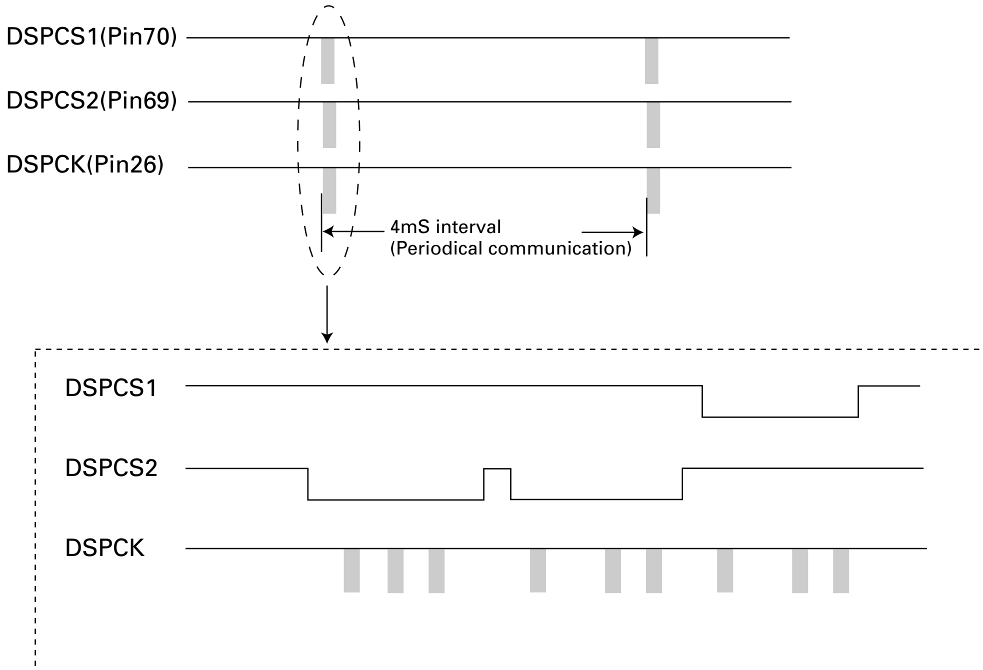
2-⑤ 1DIN RSE (OPTION)



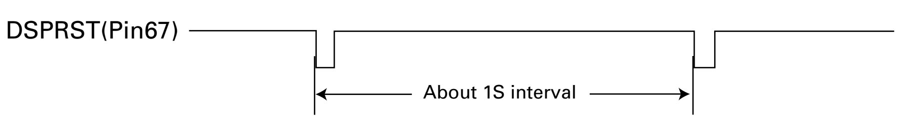
7.3.2 OPERATIONAL FLOW CHART



● DSP error check (Normal)



● DSP error check ---Error continuation



8. OPERATIONS

There is no information to be shown in this chapter.

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